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Current Notes

Vol. 10 No. 3 AACE April 1990

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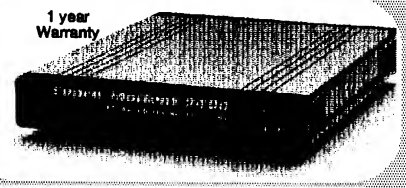

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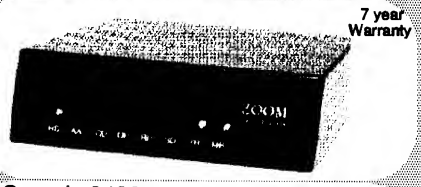

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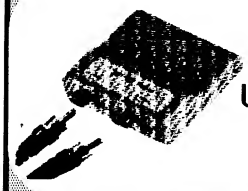

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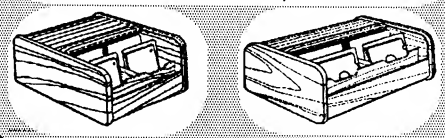

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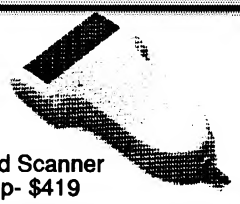

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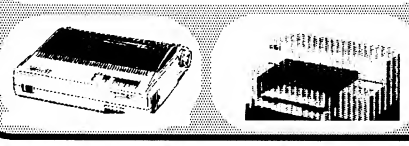

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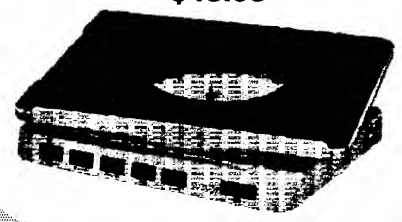

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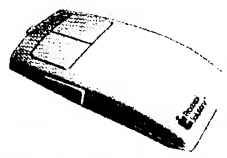

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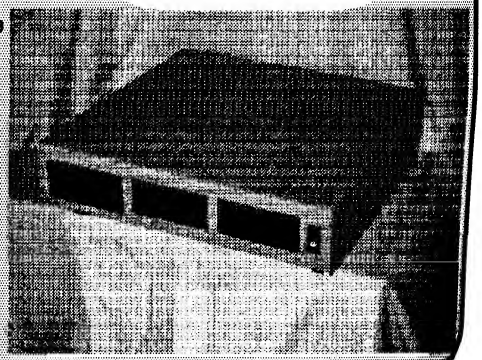

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* Atari XL/XE program.

From the Editor's Desk:

Things Just Take Longer Than Expected

Another month has come and gone and, but for this editorial, another issue of *Current Notes* is finished. Each month, I am determined to explore, among other things, more desktop publishing alternatives on my Atari. Each month, somehow the time flies by and I just can't get to it. In fact, just keeping CN operational takes an incredible amount of time. There are just not enough extra hours in the month to invest in new opportunities. This is true for me. It is true for my wife. I suspect it is also true for a lot of other people as well.

If it were just a matter of using our computers to do our everyday tasks, things need not be so hectic. But, our Atari computers not only get the job done, they hold enormous potential for doing more. Coupled with extra hardware, like the fixed and removable hard drives, printers, modems, scanners, tape backup systems, the Spectre Mac emulator, and the new Super-Charger IBM emulator, our humble Atari STs or Megas are transformed into tools that are much more than the sum of the individual parts.

If you have been in the Atari community for a long while, you may remember getting your first Atari, perhaps it was an 800 or even the little 400. The computer, a tape cassette or disk drive, and a television set were all you needed to be up and running. With this setup, you could play an amazing variety of games and try your hand at programming. There was enough here to keep you and your family entertained for a long time.

But what happened when you bought a printer. Suddenly, using your little computer was transformed into an entirely different kind of experience. The ability to put a result on paper now meant that you could write letters, even compose novels if you wanted to, keep track of any kind of data and print it out sorted however you wanted. Your computer was transformed from a game machine into a productivity machine.

Similarly, by adding a modem to your setup, you became connected with the world of telecommunications. Now, by having your computer call up a bulletin board or a national online service, you could correspond with fellow Atarians all over the country, even across national boundaries. You could increase your library of software just by moving a file, electronically, from some distant computer system to your own computer in your own house. Wow, the wonders of the electronic age.

But, there was, and is, a price to all this added flexibility. There is, of course, the cost of purchasing the extra hardware or software. This can set you back some, but this is not the real big cost. The big expense comes in learning how to use your new found capabilities. New software, particularly productivity programs like database software, telecommunication packages, or desktop publishing, come complete with manuals, large manuals. To master these programs you will have to read, at least some, of the manual and get a lot of hands-on experience using the software. And how about new hardware? Do you really know how to make your printer do all it's capable of doing?

To take advantage of some of these wonderful software and hardware add-ons requires a sizeable investment of your time. And, unless you happen to be a computer professional who gets paid to spend time learning computer stuff, you spend much of your time at your normal job where, for most of us, very little time is devoted to Atari. Thus, only a few "leisure" hours are available each week to devote to learning new things about your computer.

So, it really is no surprise that most of us still have some software on the shelf that we haven't even been able to open up yet. Nor is it a surprise that we haven't been able to fully master the fine art of whatever new thing we are into these days, whether it be programming, publishing, music, graphics, printing, or whatever. Since there aren't enough hours in the day, things just take longer than expected.

There are many new things I would like to do with *Current Notes*, many worthwhile suggestions that I would like to follow up. I'd like to master more desktop publishing packages. I'd like to completely automate my subscriber database. I'd like to get comfortable in the Mac/Spectre world as well as the ST world. I'd like to find more Atari stores to carry CN. I'd like to introduce more Atari Clubs to CN. I'd like to completely index the CN Library. We try to get just a little better each month, but progress is slow, sometimes painfully slow. Since there aren't enough hours in the day, things just take longer than expected.

We often become exasperated because we do not see many new products or initiatives coming out of Atari Corp. Whatever happened to the CD-ROM drive? Where is the Stacy? Why couldn't the STE pass FCC tests? When will we see the new TT? Where are all the new products for the 8-bit line? Why couldn't the new Lynx be available in time for Christmas? Why hasn't the Atari laser been improved? But, before we get too many ulcers worrying about the lack of new products from Atari, we should just remember... Since there aren't enough hours in the day, things just take longer than expected.

Joe Waters

April, 1990

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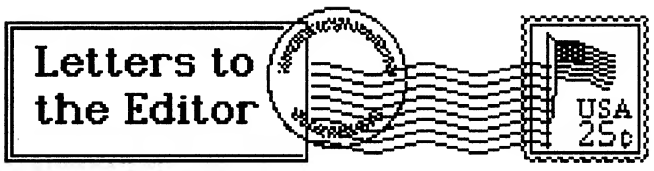

Bill Yerger and Computer Appliances

Dear Editor,

In reference to the Jan./Feb. 1990 edition... What an issue! From Bill Yerger running for office as a write-in candidate for an Atari Corporate position to Frank Sommers praising Charles Cherry (among others) as a renewed hope for Atari to John Barnes upbraiding Mr. Cherry for his "computer appliance" concept, it made for exciting reading. Free speech and the art of argument are alive and well in *Current Notes*. So, as long as they are, I thought I'd kick in my two cents.

First, Mr. Yerger has to be very good at selling computers and managing a business to survive for four years as an Atari ST dealer. I think the corporate environment might be quite different. In my nearly 48 years on this globe I've come to find out that changes in approach in businesses usually have to come from the grass-roots outside the business or from the top. They are rarely accomplished from the middle. Also, in order to quadruple Atari ST sales, you have to have quadruple the computers available to sell. I was on the phone the day before yesterday with my closest dealer (in Minneapolis, 100 miles distant) and they had no 1040's or Mega's in stock and can't seem to get any, but I could buy all the Portfolios I wanted. But then strange things do happen. Bill Yerger has something not everybody has--a dream, and I wish him luck in his pursuit.

Next, I wish to disagree with the Junkyard Pussycat. I happen to like Charles Cherry's "computer appliance" concept. If I were selling Atari computers (which I would love to do, and will do if ever I win the lottery at the 10 million dollar level and don't have to worry about making a living), I would sell them as economical application packages (desktop publishing, MIDI, etc.), then after the sale say, "Oh, by the way, you can keep all your books on this too..." Open architecture expands the possibilities of a computer but, unfortunately, also the price. Atari makes a reasonably versatile computer at a good price and markets it (ok, so markets is too strong a term) as "the computer for the rest of us." I'm the "computer appliance" type of person who just wants to be able to do a job without going through a lot of rigamaro to do it. For those who have the larger vision of the computer as a "virtual machine," it seems that getting there is half or maybe most of the fun, and, if it wasn't for them, we wouldn't have computers to begin with.

Thanks again for a fascinating issue and keep up the great work.

John Berthold
Elk Mound, WI

It Could be Worse Atarians

Dear Mr. Sommers,

I attended the Atarifest and thoroughly enjoyed being there for both days. While there, I purchased the first issue of a new ST magazine, a disk magazine, STatus Disk Magazine. I gave my name and address and, along with others, was supposed to be contacted to take out a subscription in the magazine. I liked the first issue very much, and was going to write a letter to their "Letters to the Editor" column as the editor urged the readers to. However, in this section of the disk, the editor gave no address to which to write. Furthermore, I have received no information about further issues and a subscription. (There is no address anywhere on the disk.) Has STatus Disk Magazine folded? Do you know anything about the situation? *[No, but I'll pass your question on to Dave Troy (Myths and Mysteries) and see if he can find out. -JW]*

Turning to another subject, my son and daughter both have Mac Pluses, my son-in-law, a Mac II. I own a Mega 2. Sometimes I become a little depressed as I read through the five different Atari publications I receive and hear various blunders: not having the STacy out when promised; not supporting the American market; not establishing rapport with dealers and cooperating better with third party software developers, etc., etc.

I am in a much better mood now, though. During Christmas, my son was visiting us and I picked up the December issue of *MacWorld* magazine. Let me tell you that not all is well in the Wonderful World of Mac!

One letter to the editor castigated Apple's apparent turning away from the "rest of us" for whom the Mac was touted as having been developed. Instead, the writer argues, Apple's new products, especially their newer Mac's are definitely upscale and aimed at the affluent business public, not the rest of us. A new Mac operating system, I believe it is called 7.0, will make obsolete most of the software written for previous OS's.

One of the major articles in the issue was a satirical fantasy in which the author describes a museum that he has built and filled with all of Apple's broken promises: hardware not produced, software not updated, operating systems not fully fleshed out.

The most shocking article was about Apple's policies on hard drives for the Mac. If one buys an Apple hard drive for the Mac, the customer receives a 90-day warranty. Yet the drives from Seagate and Quantum are delivered to Apple with a one YEAR warranty! If the drive goes bad on the 95th day, Apple charges the customer for the repairs, despite the fact that the manufacturers do not charge Apple for the repairs!! (According to the article, when Apple was asked for an explanation, they said that their customary guarantee period for all their products is 90 days, and they wanted to be consistent to avoid confusion.) (?)

Sincerely,
Robert Hochwalt
North Canton, Ohio

What I Would Like to See

Dear CN,

Thanks for creating a fantastic monthly magazine. I really look forward to seeing it in the mail box each month. I forgot to renew and I am hoping that I don't miss any of the issues. Please let me know (if possible) if I should go out and try (it's hard) to find the February issue if you can't process my renewal in time to send out the next issue.

While I'm here, I might as well give you comments as to what I would like to see the magazine be. I love the format, *lean and mean* [Gawd, I hate that phrase], and I especially like the quality of people you publish. I guess that is why I get so depressed after reading them most of the time. They often point out some real depressing realities concerning the ST world.

There is a definite lack of serious applications coverage in the ST world. People pick up magazines because they can learn something about what they want to do.

Shareware. Magazines seem to think that reviewing PD software and shareware programs is some kind of sin. Reviews of shareware products should be a reward for those who invest their talents and efforts into a very tough market.

Desktop Publishing. For all of the hype that I hear that the ST/Mega system is a hot way to go, there is almost no discussion concerning a field that seems to be a natural. I would like to make a living off of the ST, but it's difficult. Most of the local boards (only 3-5 in my section of L.A. county) are dominated with talk of games. Magazines reflect the same attitude.

Glorified Game Machine. Is the ST just a game machine and something for EL CHEEPOS to play with? ST magazines are dying along with the clubs that support Atari! Should I *even consider thinking* about buying a TT?

And Finally. Is Atari doing all this s**t on purpose, or are they just STUPID?

I really appreciate your magazine, and I wish you and others would put a little more effort in the serious side of computing for those of us that would like to use the ST for business.

Thanks for listening and, if possible, don't let my subscription lapse, I don't want to miss ONE issue.

Steve Blackburn
Rosemead, CA

[Thanks for your suggestions, Steve. Your missing issues have been sent out. I try and provide something for everyone in each issue, but CN doesn't have a paid staff of writers so I are dependent on what is submitted. You will, however, be happy to see that Brian Miller is producing a monthly column on shareware and PD products. Desktop publishing tips would also be a good addition (any volunteers?). Certainly, you should consider buying the TT. For serious use, you will enjoy Greg Csullog's ideas in this issue on improving your ST productivity. On purpose or stupid? Well, I'll pass on that question. -JW]

Access to User Groups

Dear Joe,

For those of you who have not already heard of .ACCess! it's time to take notice! How's that to grab your attention? But seriously, .ACCess! is a utility program for the ST that provides a full blown command line interpreter operating in a GEM window. The kicker to it all comes when you find out the CLI is completely self contained in a neat little desk accessory. Therefore you have access to a CLI at all times!

Last month, the newest release (Release 3) of .ACCess! was shipped *free* to all registered owners. We also shipped two complimentary copies of .ACCess! to most of the *Current Notes* Registered Atari Clubs. In exchange for the two copies, the groups participating agreed to give us a full page ad in the next two issues of their club's newsletter. It is our attempt to reach out to the users and obviously to promote advertising to the people that really count (i.e. you).

We have exhausted the *Current Notes* list and wish to branch out even further, extending this offer to *all* Atari user groups! The only requirement we must impose is that your group produce a newsletter regularly (i.e. monthly or semi-monthly) and you supply us with the past two issues. We will then provide your user group with two copies of .ACCess! and full page advertisement.

If your group is interested, send newsletters to: Rock Digital, Attn: Douglas Hodson, 2901 Kenmore Avenue, Dayton, Ohio 45420 (513) 254-3160.

Any ACTION Help Out There?

Dear People,

Can anyone there help me with a piece of code in the Graphics Toolkit! in the Dec '88 ANALOG? The code reads:

```
DO
  IF M=1 THEN
    T^=F^
  ELSEIF M=2 THEN
    T^==%F^
  ELSEIF M=3 THEN
    T^==&F^
  ELSEIF M=4 THEN
    T^==!F^
  FI F==+1 T==+1 C==+1 UNTIL C=1
OD
```

My compiler says it doesn't understand this. I can sympathize because I don't either.

George W. Brooks
Montpelier, VT

Fourth and Inches to Go

I was wondering if you could pass on the word that a possible write-in campaign might just possibly persuade

Accolade to port over their excellent football game *Fourth and Inches* for the Atari 8-bit. Accolade was the only software developer who even bothered to reply to my numerous letters. The tone of their letter lead me to believe that they would, indeed, make the effort to release *Fourth and Inches* if enough interest was shown for it.

One letter won't turn the tide, but if we Atarians get our word processors out and start churning out those letters, thousands might. Anyone interested can write to Accolade at the following address: Accolade, 20813 Stevens Creek Blvd, Cupertino, CA 95014.

Thank you
David J. Harris

Accounting Anyone?

Dear Sirs,

I am a long-time reader of your fine publication, and feel that yours is the best of the ST magazines by far. The information, news, tips, and reviews that you publish have been invaluable to me from my first day as an ST owner.

Your reviews are always of interest to me; however, I feel one area has been neglected by your staff; namely, business users. Although I *do* play games, do word processing, and make use of many fine PD and commercial utility programs, I also use my ST software for virtually all of my display advertising, flyers, menus, and quote sheets. I use *LDW Power* for various sales and marketing purposes. I use *WordWriter ST* for my business and personal correspondence. But I have yet to find or hear about a business accounting package that includes such things as a general ledger, receivables, payables, payroll etc.

Perhaps you could steer me in the right direction, and even review such software for those of us that believe the ST is *the* machine for home and business use.

Keep up the good work, and thanks for being there!!

Sincerely,
Burke R. Oppenheimer
Walworth, NY

[There are others who would also like to find a good accounting package for the ST. How about it, readers? Is there anyone out there currently using an ST accounting package? We would love to hear about your experience, particularly if you have looked at several different packages. Please contract Frank Sommers or myself. -JW]

And the Winner Is ... Lynx!

Dear Editor,

I just read Frank Sommers' article on the Lynx game machine (And the Winner Was), and came away with the impression that his "frustration," as Frank put it, may have gotten in the way of objective journalism. To those readers who might have been considering buying the Lynx, but were discouraged from doing so by this review, I say see the machine for yourself before making any conclusions.

My three sons, ages 15, 8, and 2-1/2, and I, have had a completely different experience with our Lynx than Frank had with his. It was purchased as a gift for the boys on the Thursday before Christmas. Since that time, the unit has run flawlessly, and has at least a hundred times as many hours of use as Frank put in with his. When you first look at the unit, you are impressed with the quality construction, and after several crashes to the floor (carpeted, but still the potential for some major damage), it carries a few scars but has yet to fail to operate properly.

The quality of play of the games available for the Lynx is something that no two of us could ever completely agree on. Although I do enjoy an occasional try at *Blue Lightning*, I would suggest that the entire Lynx package, hardware and firmware, is geared to the age group that includes my sons, and I can certainly see where Frank would be less than enthusiastic with game play. My boys enjoy the games immensely, with the order of play probably a time between *Blue Lightning* and *California Games* for most popular, followed by *Gates of Zendocon* and *Electrocop*. *Electrocop*, by the way, is a role-playing game in which the player must find weapons, combinations, etc, while fighting off the bad androids, etc, in search of the president's daughter. If you watch this game, you will begin to be amazed at the amount of data and information that is packed into that little half-inch square PROM located inside the game card.

As for the matter of blown game cards and a dead Lynx, which Frank experienced, there's not much I can say to defend the Lynx on that point. I can only reiterate what I said earlier; our Lynx has operated flawlessly, under daily use, some days for hours at a time, and with constant game card changes. My boys have yet to zap a game card. We do keep the unused cards in a zip-top freezer bag for visibility and to keep everything together, and possibly this has helped us prevent static discharge into a game card. My boys are also careful to turn the machine off before changing game cards. The cards I purchased at K.B. Toys when I got the Lynx only cost, as I remember, $29.95 each, not the $39.95 that Frank paid to B.N. Genius.

Do I have any complaints? Yes, one. A major reason for buying a hand-held game machine was to provide my boys some entertainment in the back seat during our occasional long distance drives. The Lynx does that very well, but a set of six batteries lasts a little less than four hours, and can get expensive real quick. The machine is capable of operating from a DC-DC car cigarette lighter adapter, and Atari should supply one with the machine, especially at its $189 price tag! By the way, I have tried two adapters from Radio Shack, the last rated for 9 volts at 900 milliamps, which by my calculations should have worked, but would only turn on the back light and not the machine. Any suggestions for a car adapter that will work?

Which is better, Lynx or Gameboy? I don't know, having never seen a Gameboy. But I can say that the Lynx has a good "feel" as it rests in your hands, has a well laid out control setup, is of durable construction, and has impressed everyone who's seen it. AND IT HAS COLOR. Although Frank barely mentions this tremendous difference

between the two machines, it's the one factor that makes the Lynx the obvious winner in any comparison. Black and white may be acceptable in a game that requires no depth perception or the ability to discern subtle differences in shape and color, but when you play a game like *Blue Lightning* or *Electrocop*, then you fully appreciate that color enhances the "playability" of that game to a level you can't reach on a black and white system. I may not have explained myself very well here, but any of you who own both a color and B/W montior for your 520/1040/Mega STs will fully understand the difference in game play between the two monitors, and Gameboy doesn't have anywhere near the screen resolution of the ST monitor.

The Lynx is a winner. It may not sell as well as Gameboy, because it doesn't say Nintendo on the front, but that doesn't negate the fact that it's a superior game machine.

Sincerely,
Bob Plummer
Pleasant Valley, NY

[I'm delighted your experience with Lynx has been so positive. I was disappointed that the Lynx Frank received broke down and was returned (before I even had a chance to see it!) I bought the Gameboy that Frank evaluated. It became a Christmas gift for my daughter since we didn't have a Lynx to give. I have used the Gameboy and find that the screen is very hard to see, at least for my old eyes. I also found that the finger action required to play games gets very tiring rather quickly. I'm still interested in getting a Lynx when, and if, they ever make it to our little corner or the world. -JW]

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If your dealer doesn't have the GOOD Backup Utility, you can order it from the Computer Bug, 113 Russel St., Hadley, MA (413) 584-7722

NEWS FLASH -- Z-NET ONLINE, March 16, 1990

Atari Corporation Laid Off 15% of All U.S. Employees, Effective at 5 p.m. Pacific Time Today

This cutback and layoff is NOT a temporary measure for those who received their termination notice at the close of business today in the Sunnyvale, California offices of Atari. No expectation of callbacks in the foreseeable future was extended to the employees.

The layoffs occurred at the service level of all departments, but particularly hard hit were Accounts Payable and Credit, losing 50% or more of their staff.

Of the "Name" people that most of the public has any contact with, there were no terminations. Popular figures such as Bob Brodie, Charles Cherry, and others were not directly affected. Additionally, no changes at the executive level were made public.

Conjecture by those near ATARI is that the cutbacks are due to the fact that Atari simply has no product ready for immediate sale, and that the bulk of those laid off had little to do that is essential to the current level of U.S. Operations. The fact that the upper level employees were spared gives some reason to expect that this is not a long-term reduction in overall operation, but more an immediate action for an immediate situation.

CEO of Atari, Sam Tramell, was unavailable for comment or for employee negotiation today, having left the USA for computer shows in Europe earlier in the week.

Z*NET will have more on this story as it develops this week... look for details in the next Z*NET ONLINE MAGAZINE, issue #513, available starting Friday, March 23, 1990. And, as usual, Z*NET will bring you ATARI NEWS FIRST.

No Product, White Lightening and the STE, ST Plus, and a New GDOS

ST UPDATE by Frank Sommers

The Empty Shelves and the Strategic Decision

Would a Safeway food chain survive if the shelves of its stores were empty, or almost so, for three months? Would Ford, if they had no cars in their dealer showrooms? Or the Post Office if they had no stamps? Or Atari, if its dealers had been without product since January.

"We can afford no mistakes in this business," said the Department of Energy. So it fired the employee who had pushed the wrong button on the fax machine. That was the button that sent the daily report for the Secretary of Energy, pointing out where reactor wastes had been spewed about the day before, not to the Secretary, but by mistake, to the Governors of the 50 States in whose backyards these cesspools were created.

Similarly, someone in Atari made a mistake at the end of last year. Someone who decided that the STE and Stacy would be available soon enough to allow them to alter production in Taiwan of 1040 ST's and Mega 2's and 4's and 520's and get on with the new machines. A mistake because inside Atari it was widely acknowledged that when the Stacey and the STE flunked their exams at the FCC, Atari was "caught with our pants down." They had to quickly retool their production line to turn out ST's and Mega's and get a new supply of monochrome monitors. And then tell their dealers that there would be no product until the end of March. When you asked Atari about this, the more forthright would explain that at least three private laboratories had tested both computers before they were shipped to the FCC and reported no problems (see below).

The Mighty FCC and the Little STE

An enterprising dealer in the U.S., hoping to attract more Atari ST customers to his store in a large city on the coast, and thus avoid ending up in the increasingly crowded ADGY (Atari Dealers' Grave Yard) sent a trusted employee North. The mission was simple: bring back an STE for the store. Within a week it was accomplished, and a large placard in front of his emporium boomed out the fact that inside there was an ST Enhanced, an STE, the only one in North America, besides the one at the FCC.

When asked what the crowd reaction to it was like, he quipped, "Oh, they came into the store, but they walked right by it. They couldn't tell it wasn't a simple 1040." But once directed, they would look down on it admiringly. Of course there was no price figure available for it in the U.S., but potential customers did learn that for less than $250 above the cost of the STE you can turn it into the equivalent of a Mega 4 (one meg SIMM chips are now selling for $58).

Before actually doing that, however, the dealer called Atari's technical services department and talked to the head of it. In that conversation he learned that the tech man had never seen an STE and had no idea if there were any problems in just dropping the SIMM chips into the machine. (There weren't; it functioned perfectly.)

What about software? Well, there wasn't any extant that would use the screen features of the STE. But if you cared to watch, you would see it refresh *Page Stream* screens at more than twice the speed of an ST with TOS 1.4 in it.

What was the FCC hold up? This particular dealer estimated it might be some time before the FCC would wave the starter flag at this machine. He kept wondering who at Atari would have wasted the inspection fee and submitted one of the machines to the FCC? A Motorola engineer who inspected the dealer's STE opined that it would be hard to design a device to throw off more RF interference, even if you had that as your main objective. How did this "nuclear bomb effect" demonstrate itself? Normally, there would be anywhere from three to five computers up and running in the store, along with a TV which was normally set at channel 10. If a customer turned on the STE, white lightening would strike the screen on the TV, which then went into a high pitched whine. If you turned off all the other computers in the store, and then turned on the STE, immediately the screen would white out, like a blizzard on a ski trail. The speculation was that the STE failed the FCC test in the first four seconds as it "pegged the needle" on the test equipment.

The Ultimate

For now, or until bubble memory or something equally fantastic and smooth and workable comes along, the compact disk is probably the medium of mediums as a computer data storage device. Although few ST users have seen CD drives, in fact, there are more than 300,000 non-Atari computers equipped with them. But are there any

CD titles or programs out there to use on the drives? Only about 2,500 commercial titles. Most of the disks are large collections of data, e.g. "Birds of America." But there are a handful of games which store giant video and audio files, e.g. "The Manhole," which takes you down deep into fantasy worlds rich with sound and color.

Per Los Angeles Times reporter, Lawrence J. Magid, the number of CD drives and titles has doubled in the last year. Uses include world atlases with full-color maps of every country in the world. Corporations and government agencies are storing huge quantities of data on them for later distribution, including patents, parts, Social Security data, corporate manuals, and we've all heard about the Grolier encyclopedia. Now we also have "Compton's MultiMedia Encyclopedia," which consists of one disk with 15,000 photographs, charts and diagrams, plus 70 minutes of audio and half-a-hundred simulations. Make you wanta use an encyclopedia again?

So the main questions, where is Atari's CD drive, announced as the first of its kind way back when, and are there any applications for it? Atari seems to be sitting on the fence on this one. The drive has been shown at numerous expos over the last several years. Word had it that 10 different titles were being developed for it. But so far the only one that has seen the light of day and actually exists is a $70 disc with some 350 disks of public domain software from the Current Notes library, that works out to be about $.20 a normal PD disk. Joe tells me CN will offer the disk whenever there are drives available to play it on. If you are in a country that already has the CD-ROM drive, you can get yours now by contacting Computer Rock, 3785 Balboa St, San Francisco CA 94121 (415) 751-8573.

At present manufacturers can only write once to the disc, but within the near future, the Japanese will have a CD disk player that allows users to write and read optical discs. Hard drives will slowly become an anachronism in the world of computers.

What Price Compatibility?

Some of us have remarked in the past that $300-$500 for emulators that turn our ST's into Macintosh's or IBM's is a bit stiff for the cost-conscious Atari user. But we have gone ahead, many of us, and grabbed up every advance that Dave Small has made in his Macintosh emulation; currently the GCR cartridge that runs original Mac software on your ST sells for $300 plus the cost of ROM chips. Our major complaint about these emulations is not price but why they weren't here sooner, e.g. *pc ditto II* or *SuperCharger* with price tags up to $450 for *SuperCharger* (see Milt Creighton's feature on this new IBM emulation from Germany in this issue.) And dollars be damned! We were more than a little proud that ours was the only machine that could emulate the other two. Someone must have passed this dirty little secret (certainly Atari Corp. didn't brute it about) on to Apple and IBM users. There are now emulators going both ways: Apple and Mac's to IBM and IBM back to Apple II+'s and IIe's, but not Macintosh's. And cost? The Mac86 board which turns the Macintosh SE into an IBM is $700. And the Mac286 board, which transforms any model of a Mac II into a Big Blue, clocks in at $1,600. However, note that with either board you can run IBM and Macintosh programs simultaneously. Each is displayed in its own window and it allows transfer of text and graphics back and forth across operating systems!

Updating the Teal Deal

pc ditto II is out on the streets. Initially only about 10% overall were working. Those people who were waiting for the "PAL chip" to be able to attach pcDitto II to their 520's, 1040's and Mega's have now received that chip. The problem is, only about half of that group have their machines up and working. The other half are experiencing difficulties getting proper connections, making sure there are no loose cables, testing to make sure they don't have a weak MMU (Memory Management Unit) chip, i.e. they are having to re-jigger their systems to get them up and running. Apparently, the connecting cables are notoriously loose. Most of these find the problem can be solved. But still, a cursory survey suggests that about 10 % can't get *pc ditto II* to work, no matter what they do. What does it all add up to? Obviously Avant Garde Systems has overcome a hoard of problems, thus insuring that everybody's emulator works or they'll get their money back. But what about new orders? This would seem to be an even bigger obstacle to overcome. It will require convincing the new buyer that all problems have, indeed, been solved, and all boards that are being shipped are in perfect working order. No small task. We believe Bill Teal is up to it.

Tid Bytes

Goodbye Mega: Did you know that there will soon be a "new" Atari computer. Production of Mega's, once the STE and the Stacy's are available, reportedly will cease and the Mega will be replaced by the ST Plus--essentially a Mega with a VME board in it to allow connection to existing standard local area networks. **Old Hat**: Those of you with new Portfolios may find that they have just become "Old Portfolios." Electronic rumors on "the boards" have it that a new and more powerful Portfolio will be introduced *soon*. Barring a new definition of that word by Atari, the current machines should continue to be "new" for at least a year. Atari was trying to pick up its flagging sales of the hand-held machine, down worldwide by almost 40%, by offering the dealer a $50 discount which could be used for advertising or, if the dealer wished, could be passed along to the buyer. **A Larger Atari**: There's a bedtime story going around that after its hassle with Epyx about the Lynx, which put Epyx out of business, Atari then acquired the firm, such as it was, and it is now incorporated into Atari and doing all the development work on new programs for the Lynx. **GDOS Lovers**: Don't get too attached to your GDOS; Atari is totally redoing GDOS and may issue it as soon as this summer.

SuperCharger

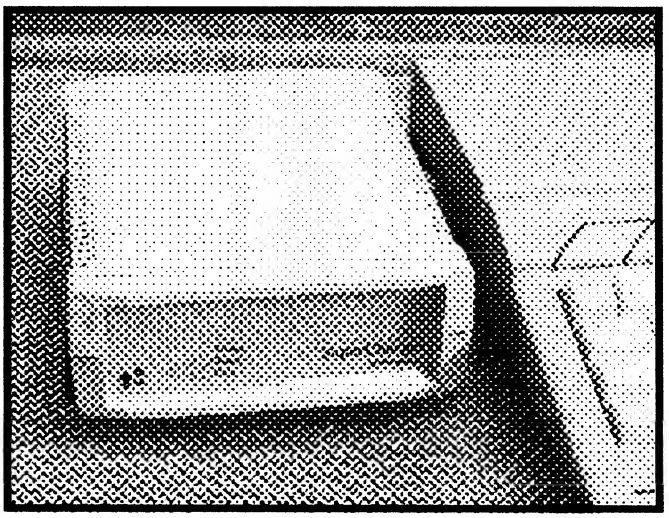
The PC Emulator from Talon Technology

Review by Milt Creighton

SuperCharger is a new MS-DOS emulator for Atari ST and Mega computers. Basically, this spiffy German import will turn your trusty ST into a PC XT clone operating at turbo speed. Where other PC emulators such as *pc ditto II* and *PC-Speed* require rather extensive installation best accomplished by an experienced technician, installation of the externally packaged *SuperCharger* is simple and foolproof. Just plug it into your computer's DMA port, attach the power cord, and you're ready to fly. The entire procedure can be accomplished in less than five minutes by almost anyone regardless of technical experience.

Price and Value

SuperCharger carries a rather hefty advertised price tag of $399 but it will probably sell for $50 more than that by the time it is available for sale in the US. That will be $150 more than the full-priced *pc ditto II* and $50 more than *PC-Speed*, but there are some major mitigating factors that increase the value of *SuperCharger*. It also needs to be pointed out that as I write this, most of the current crop of *pc ditto II* boards (including my own) are non-operational, pending the arrival of new PAL chips. In addition, the price tag of *PC-Speed* usually doesn't include a rather complex installation procedure which could well bring the total cost of Michtron's emulator to $450 or more. Also, *SuperCharger* comes bundled with MS-DOS 4.01--an $80 to $100 value depending on where you buy it. Neither *pc ditto II* or *PC-Speed* comes with DOS. It will be a separate expense if you purchase either of the other emulators.



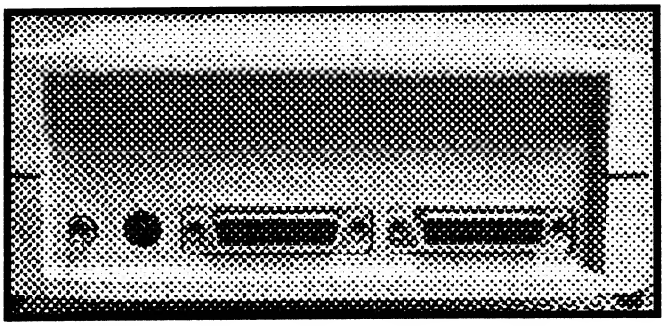
Design

The basic design of *SuperCharger* is very different from the other emulators; both *PC-Speed* and *pc ditto II* are internal add-on boards (although there is some doubt whether *pc ditto II* can really make that claim, given the size of the board). Internal add-ons do not require FCC certification because they are mounted under the hood (so to speak). They make use of the ST's own RAM chips under MS-DOS emulation. In contrast, *SuperCharger* is an external unit (requiring FCC certification) which is packed into a mini tower-style case. It comes complete with its own RAM, adding some inherent flexibility, as we shall see. The advertised basic version of *SuperCharger* (prior to its release in this country) only carried 512K RAM--upgradable to 1 Megabyte.

I understand, from just having talked to the president of the company, that Talon is having second thoughts about selling *SuperCharger* in the US with anything less than 1 Megabyte of RAM. European dealer feedback suggests performance of the unit is marginal with only 512K and the additional cost of technical support for those customers who don't understand the RAM limitations is pushing Talon toward offering only the 1 Megabyte solution. That decision does require raising the advertised price of $399 to $450, but for that price you get 704K of RAM to play with under MS-DOS.

SuperCharger comes packaged in an attractive plastic case designed to sit on its side next to your ST. The case is about the size of an external Atari floppy disk drive sitting on its side, but not quite as wide or deep. For the purists among you, the actual dimensions are 6" high by 7.5" deep by 2.25" wide. *SuperCharger* is made for Beta Systems by Siemens, a noted German electronics manufacturer using advanced surface mount technology. The emulator is powered by an 8MHz NEC V30. The RAM chips are four (or eight in the case of the 1 Meg version) 256K chips (didn't check the speeds). There is also a socket for an INTEL 8087 math coprocessor which you can add if you choose. Lots of MS-DOS applications can detect and utilize a math

coprocessor, unlike the very few applications that make use of Atari's 68881. The *SuperCharger* case sports a power switch and two DMA ports on the back and two LED's and a reset button on the front.



In addition to the *SuperCharger* itself, you also get a three foot DMA cable, an external DC power supply (Talon has chosen not to use the joystick/mouse port power lead being offered in Europe), the *SuperCharger* manual, a utility disk containing the *SuperCharger* initialization program and other utilities, and MS-DOS 4.01.

The version of *SuperCharger* I received for this review was an older model without some of the enhancements that have been incorporated into the ones that will be sold in the US. As of this writing, Talon has received a Class A certification from the FCC which means *SuperCharger* is approved for commercial use but cannot yet be sold for use at home. Class B certification is probably a couple of weeks away. *SuperCharger* should be available for home use by the time you read this.

Installing SuperCharger

After receiving *SuperCharger*, I initially installed it on a 1 Meg 520ST running TOS 1.4 that is attached to an Atari SC1224 color monitor. (Later, I also tried it on my TOS 1.4-equipped MEGA ST4 which also has Jim Allen's T16 accelerator board installed--they were fully compatible, by the way). The 520 system is equipped with two floppies and a 49 MB Seagate hard disk using a Supra host adapter. My host adapter doesn't have a DMA pass through so I was forced to attach the *SuperCharger* to the DMA port and then attach the hard disk to the *SuperCharger*. This is not an ideal setup. *SuperCharger* wants to be the last item in the DMA chain. I understand the newer units have been re-designed to be more tolerant, but the older one I used could only be described as balky under those conditions. Also, it is important to make certain *SuperCharger* is turned on before booting from your hard disk; otherwise, the emulator will interfere with the boot procedure. Because of the older version's intolerance to my host adapter booting TOS from my hard disk, I had to reset *SuperCharger* twice on both cold starts and resets. I am assured that this is no longer necessary on the newer units so I won't belabor the point.

Once TOS is booted, initializing *SuperCharger* is a simple matter. Just insert the utility disk in your disk drive and run the startup program. The first time I tried it, I immediately lost vertical sync on my monitor. The picture rolled endlessly, looking just like a lot of European software that hasn't been modified to run on US monitors. It turned out that was exactly what the difficulty was (thanks, LeRoy). I hadn't installed *SuperCharger* for my US monitor. Of course, had I read the manual first I would have corrected the problem a lot sooner.

Rebooting, I ran the install program and set *SuperCharger* to respond to my 60 Hz monitor. This time it ran flawlessly and instructed me to insert my MS-DOS disk. I did and the unit began to boot the DOS system disk. A message appeared on the screen informing me that *SuperCharger* had recognized the Atari partitions on my hard disk--a special driver is included on the DOS disk to permit that. Finally, the familiar "A>" prompt appeared on the monitor screen. I found myself in the world of MS-DOS.

SuperCharger's BIOS

The manufacturers of *SuperCharger* wrote their own BIOS for the emulator rather than licensing one from Phoenix or one of the suppliers to IBM clones. It's understandable why they did it; the licensing fee adds to the cost and there would still be the matter of rewriting code to access the Atari keyboard, TOS, and screen RAM. In addition, it permits *SuperCharger* to utilize its own screen fonts rather than settling for the less elegant IBM fonts. On the other hand, it takes talent and detailed knowledge of the IBM BIOS to write code that will be fully compatible with the wide range of IBM software. Bill Teal of Avant-Garde is very good at this, for example. *SuperCharger*'s Bios is successful in some areas and not so successful in others, as illustrated later in this review.

I won't pretend MS-DOS is completely unfamiliar territory to me. I have a 386 machine at work that I use every day. However, I am by no stretch of the imagination an MS-DOS guru either. Like many of you, I can get around in that world when I have to, but I prefer the friendlier TOS operating system.

Rationalizing Why I Need SuperCharger

Then why, you might ask, was I interested in doing this review? The answer is simple and will serve to reveal my particular biases. Support from Atari software developers is beginning to fall off significantly. Major software houses such as WordPerfect Corporation may never release their most modern and powerful programs for the ST. Even more ironically, the day may come when US software companies release their products in Europe where the ST is a success and ignore the problem US Atari market altogether. *SuperCharger* and other emulators like it (if successful) promise to give the

ST a new lease on life. But that's not the whole answer either.

In addition, I like strategy games and the folks who produce such games are beginning to turn their noses up at the thought of doing conversions (let alone original games) for the ST--a quick glance at Computer Gaming World magazine mail order advertisements will reveal the shrinking number of strategy/adventure games being offered for Atari computers. IBM owners, on the other hand, find themselves with an embarrassing array of riches. The handwriting is on the wall for anything but arcade games. I don't want to see my ST reduced to the status of an expensive doorstop in pursuit of my hobby.

Hard Disk Jitters

During the first couple of sessions, I navigated around the not unfamiliar waters of MS-DOS without accessing my hard disk. To tell the truth, I was just a bit leery of doing that until I felt more comfortable with *SuperCharger*. Other emulators have a history of corrupting data on TOS partitions. Finally, the time came to bite the bullet and try it. I attempted to get a directory of drive D. (No sense in blowing my boot partition if something went wrong, I thought). Nothing did. The directory appeared without incident. I copied an MS-DOS program from floppy to a folder on a TOS partition and then ran the DOS program from the hard disk. It ran flawlessly--and with blinding speed! DMA ports and hard disks are made for each other whether you are under TOS or MS-DOS.

Autobooting DOS

It was time to take the plunge. Gritting my teeth, I decided to boot MS-DOS from the hard disk. That required reformatting a partition of my hard disk for MS-DOS. Even though I had backed up my TOS partitions, I wasn't eager to blow my TOS boot partition in the event *SuperCharger* didn't format the correct one. In order to install DOS so that it will autoboot from the *SuperCharger* initialization program you must exit MS-DOS and run the install program (SC_INST.TOS) from TOS. After running SC_INST.TOS you must select the hard disk initialization option and then choose a partition from which to boot MS_DOS. DO NOT, repeat DO NOT, choose partition C or you will be unable to boot your hard disk under TOS without reformatting and destroying all your data. Choose another partition--in my case I chose partition F. The partition you choose should be 4-5 Megabytes in size. This has something to do with *SuperCharger*, I really don't know the reason for the size limitation. In any case, it's worth repartitioning your hard disk to meet this requirement. After having selected the MS-DOS boot partition, the installation program will format that partition. Next you must exit the installation program (after ensuring you have saved the current configuration to disk) and run the *SuperCharger* initialization program. The initialization program itself can be put on one of your TOS partitions, of course, since it is a TOS program.

Once you get the A> prompt under DOS, run "HTRANS" from the MS-DOS 4.01 boot disk and the program will begin to copy MS-DOS to your MS-DOS boot partition which is drive C. Whoa there, drive C? Yes, that's right; while under MS-DOS, *SuperCharger* will recognize your MS-DOS formatted partition as drive C wherever it is. Your TOS partitions will each be bumped a slot while under DOS. Therefore, your TOS drive C partition becomes drive D and so on. Once you are back under TOS everything reverts back to normal. By the way, it's a good idea to remove your drive icon for the MS-DOS partition from the TOS desktop to prevent accidentally accessing it under TOS. That could corrupt the entire partition. I know from experience.

Problems

Unless Talon has changed the utility disk from the one I used you still aren't home free. After copying the MS-DOS boot disk to drive C, you will be instructed to reboot *SuperCharger* using the <control><alternate><delete> key combination. This autoboots MS-DOS from drive C. Next you must run the program "HT_REST." At this point there could be a problem. The keyboard may produce strange characters in place of the ones you are accustomed to. In the process of autobooting DOS from the hard disk you just may have changed from a US to a German keyboard and the underline key won't work. How are you going to run HT_TRANS? Don't panic--just press <shift><?> and the underline will appear. A message (in German) may now appear on the screen. It instructs you to insert the second DOS disk (DOS 4.01 comes on two disks) in drive A and press <return>. Once you do this, the remainder of the system will be copied to drive C. Now you have all of DOS 4.01 on your hard disk ready to autoboot. You may still have a German keyboard, however, so you need to reset it to US specifications.

The means to change the keyboard are found on your *SuperCharger* utility disk. However, if you follow the manual exactly (unless the utility disk has been updated) all you are likely to do is to reset your keyboard to British specifications--an improvement over the German keyboard but still not really desirable. If you prefer, you can always just transfer the AUTOEXEC.BAT and CONFIG.SYS files from the utility disk to your boot partition. A special driver allows you to read TOS floppy disks while under MS-DOS. Talon assured me they are changing the files to call up the US keyboard. A simple way to check whether you have the US keyboard properly installed is to try to type a "$" on your keyboard. If you get some other character, you have the wrong keyboard installed.

One other problem I heard about and confirmed during the review was that the US keyboard map for

SuperCharger omitted the backslash key (both characters) altogether. Now the vertical line, you can usually do without, but just try to get around in DOS without a backslash. Talon is working on the problem (it's a simple fix) and I was told the new software should be available before any *SuperCharger*s are shipped.

Documentation

I did not like the *SuperCharger* documentation. The manual I was given is just plain unsuitable for the general public. It was a UK manual that didn't apply to the version of *SuperCharger* I received along with a collection of errata sheets and press releases. I spend a good deal of my time working with computers (MS-DOS computers included) and I found it confusing. Thankfully, Talon recognized the problem early and has already produced a new manual specifically for the US market.

System Specifics

OK, so now you have *SuperCharger* installed and MS-DOS autobooting off your hard disk. How well does the system perform? Before getting to benchmarks and specific program performance I want to explore one other subject: disk drivers. No, not disk drives, disk drivers. The *SuperCharger* software installs a special disk driver so you can access your TOS hard disk partitions while under MS-DOS. As stated before, while the MS-DOS autoboot partition can contain no TOS files, TOS and MS-DOS programs and folders peacefully coexist with Atari programs and folders on any TOS partition. In addition, *SuperCharger* installs another logical floppy disk driver at the end of the drive chain that also controls the operation of your double-sided drive A. The reason for that is simple. *SuperCharger* emulates a PC XT. PC XT computers do not have 3.5 inch floppy drives. If you format a disk in drive A or B, it will be formatted for 360K storage (single-sided use) only. So the logical drive at the end of the DMA chain is designed to format double-sided (720K) MS-DOS disks.

There are several potential problems that you need to be aware of in using *SuperCharger*. RAM resident programs (such as AUTO programs or desk accessories) that you customarily load upon booting TOS do not necessarily disappear under MS-DOS. RAM disks, for example, that are created under TOS will usually be recognized as logical drives and respected by *SuperCharger*. While that means youcan use some of the ST's RAM under *SuperCharger* applications, it also can pose problems. Certain other TOS utilities may be misidentified by *SuperCharger* and installed as logical drives. This can corrupt the FAT on your hard drive. Believe me, I know. I lost data on my TOS boot partition because I came into MS-DOS loaded with TOS RAM overhead. Take my advice and dump your desk accessories (except for well-behaved RAM disks) BEFORE initializing *SuperCharger* until you learn which ones might conflict.

In addition, you will need at least one double-sided disk drive to run *SuperCharger*. It will run just fine on an unmodified 520ST as far as I can tell, but MS-DOS only recognizes 720K 3.5 double-sided disks. The distribution disks are all double-sided.

The Hot Key

SuperCharger has another feature none of the other emulators have. Talon calls it the "Hot Key." The Hot Key freezes your MS-DOS application and automatically reboots TOS. It is functionally the same as a reset under TOS, but should you return to MS-DOS by running the *SuperCharger* initialization program again you will find yourself in MS-DOS application at the point you left. Naturally, you have to be careful not to destroy or change any of the active MS-DOS files while under TOS.

Laser Printing

The SLM804 Atari laser printer is supported by *SuperCharger* in like manner. Since TOS RAM is not utilized (unless you are using a RAM disk) while *SuperCharger* is running, the laser printer driver loaded under TOS can be accessed while under MS-DOS simply by accessing the DOS parallel printer port LPT1. Naturally, you have to install your application for the proper printer driver, namely the Diablo 630 or the Epson FX-80 (now that Atari has finally released it as freeware) emulators. Intriguingly enough, the UK *SuperCharger* manual also suggests there might be a HP-laserjet emulator for the SLM804 as well. Are we behind again and didn't even know it?

You may have a problem in trying to use your SLM804 with *SuperCharger*, however. Some versions of the laser printer (mine included) are preset to device address 7 but respond to device address 3 as well. *SuperCharger* is preset to device address 3 from the factory so a conflict can occur. Talon would recommend that you change the laser printer device address to 6, but if you cannot remember how to do that you can change the *SuperCharger* device address by moving some jumpers inside the case. If you change the device address of *SuperCharger* don't forget to rerun SC_INST.TOS (the install program on the *SuperCharger* utility disk) and tell the *SuperCharger* initialization software about the new address.

Video Emulation Modes

At present, *SuperCharger* supports CGA (4 color), Hercules monochrome, and IBM monochrome graphics modes. The version of *SuperCharger* I reviewed did not have the Hercules monochrome mode so I wasn't able to test it. However, I should point out that Hercules monochrome resolution exceeds the resolution of the Atari monochrome monitor. Therefore, you must use a

key on the numeric keypad to toggle between the left, center, and right views in order to see the entire screen. You do see most of the screen, but you won't see edge to edge. If you are fortunate to own a multisync monitor and have the proper adaptor hardware you will be able to see the entire screen at once. More on that in the future enhancements section.

Mouse and Joystick Support

SuperCharger supports a mouse systems mouse (you must obtain the proper driver to use it though) but does not support a joystick--at least I could not find a single program that worked with the Atari joystick. Since joystick-supported programs under MS-DOS normally write directly to the joystick port, it would appear this should be a relatively simple item to fix. A serial mouse is also a possibility for a future upgrade if Talon is looking for suggestions.

MS-DOS 4.01

There have been some complaints about the downward compatibility of MS-DOS 4.01 even within the IBM world. Some applications just plain won't work with it and others experience intermittent problems. If you have difficulty running a specific application, try another version of DOS (such as DOS 3.3) before deciding that application isn't compatible with *SuperCharger*. By the way, the new shell feature of DOS 4.01 described in the *SuperCharger* manual is a sort of poor man's GEM. It shows you just what lengths the benighted IBM world will go to emulate the ST operating system.

Performance

I ran a number of MS-DOS programs to get a feel for the usefulness of the *SuperCharger* emulator. For me, benchmarks don't tell the entire story. Let me share with you what I found.

- ***Norton Utilities 3.10*** works--at least everything I tried worked. I ran the speed index and got a rating of 3.7 on my 520 ST and 3.9 on my Mega4. Norton Advanced Utilities version 4.5 resulted in an si rating of 4.2 on the Mega4 (obviously Norton has changed the way they compute the speed index). Others have gotten ratings as high as 4.4. It may have to do with the speed of screen RAM on your particular ST. Overall the speed of the emulator is more than acceptable. It is just plain fast. Graphic screen updates are a bit slow, but perfectly acceptable.
- ***WordPerfect 4.2*** works, including the spell checker and thesaurus. Print also worked with the output directed through LPT1 to a NEC P6 printer. It is a fully functional and usable word processor under *SuperCharger*.
- ***WordPerfect 5.0*** did not work, even though it works under *pc ditto*. Another reviewer found *Word Perfect 5.1* would run.
- ***Q & A*** from Symantec Corporation (an integrated word processor and database works.
- ***Write Right*** (grammar checker) works.
- Timeworks ***Publish It!*** works, including the mouse. The mouse didn't scroll as smoothly as on the ST under TOS, but it worked fine. I loaded the sample document and printed it. Print speed was just as fast as Timeworks Publisher is on the ST.
- ***Qmodem*** **v2.2** (terrific shareware terminal software) works. The modem is supported under COM2. COM1 is reserved for the Atari mouse.
- ***Lotus Metro*** (desk accessories) works.
- ***Reach for the Stars*** (SSG strategy game) works.
- ***Empire*** (Interstel strategy game) works.
- ***Starflight*** (Electronic Arts strategy game) works (keyboard only).
- ***John Madden Football*** works marginally (no sound, no joystick or mouse support even with mouse driver installed).
- ***Sword of the Samurai*** doesn't work. This program employs key disk protection that goes right to the floppy drive controller chip. The *SuperCharger* BIOS generally does not emulate that chip successfully enough for programs employing this protection scheme to work. Future Upgrades to the BIOS may eventually allow this program to work.
- ***M1 Tank Platoon*** doesn't work. See above.
- ***Fire Brigade*** works (keyboard only).
- ***Romance of the Three Kingdoms*** from Koei does not work. Works under *pc ditto I*. Obviously, a difference in the BIOS.
- ***Starfleet II*** works.
- ***Bard's Tale II*** works.
- ***Simcity*** works.
- ***Pool of Radiance*** (SSI adventure game) works. Does not work under *pc ditto I*. Again, a difference in the BIOS with *SuperCharger* getting the nod.
- ***Monday Night Football*** works (no sound, keyboard only).
- ***Ancient Art of War*** does not work. Works on *pc ditto I*. Not copy protected. Probable BIOS problems.
- ***Ancient Art of War at Sea*** does not work. See above. I tried a different DOS on both v. and w. since DOS 4.01 is known to be somewhat temperamental, but it made no difference.
- Public domain software--it all worked.

Future Enhancements

The external design of *SuperCharger* lends itself to expansion and Talon has lots of plans for their emulator. Probably the first will be a miniature VGA (that's right, not EGA but VGA) card to be inserted in the expansion slot inside *SuperCharger*. Naturally, neither of the current Atari monitors is capable of displaying VGA resolutions. To implement the upgrade you will need a multisync monitor. The prices of those babies can go up over $1000, but Talon plans to offer one for about $450. Of course, they also offer Omniswitch (a combination drive B and monitor switch box that also has a connector for a multisync monitor) which will interface between their multisync monitor and your Atari computer. Right now OmniSwitch is out getting a face lift and the new version will appear in spiffy Atari grey. If you decide to go this route you will end up with a single monitor that will display high, medium, and low resolution under TOS and up through VGA under DOS. Looks like a very useful upgrade.

Another planned upgrade will be a bus expander, an add-on box that will accept a number of IBM-style third party cards. Some of the possibilities include additional RAM (hopefully, EMS will be included in upgrade plans), local area networks, and even controllers for MS-DOS CD ROM drives. With the number of third party cards available in the MS-DOS world, the possibilities are nearly endless.

There is also talk of someday being able to use the Atari's RAM as EMS while under MS-DOS, and of being able to use *SuperCharger* as a RAM disk under TOS.

The Bottom Line

SuperCharger was late getting here. *PC-Speed* has been on sale for months (if you can find it) and *pc ditto II* has been in the hands of early purchasers almost as long--never mind that it didn't work. Most of the attention in the US has been focused on these two products. *SuperCharger* appeared to have a lot of ground to makeup. That's history now. In a year's time *SuperCharger* will be widely regarded as the premier MS-DOS emulator on both sides of the Atlantic provided the company follows through with promised enhancements. $450 may seem like a lot to spend for a PC XT emulator, but the price is very deceiving. You get a lot for your money. The portability, ease of installation, and flexibility of design put *SuperCharger* firmly in the lead. There will be some growing pains, there always is with a new product, but for my money *SuperCharger* is the MS-DOS emulator of choice.

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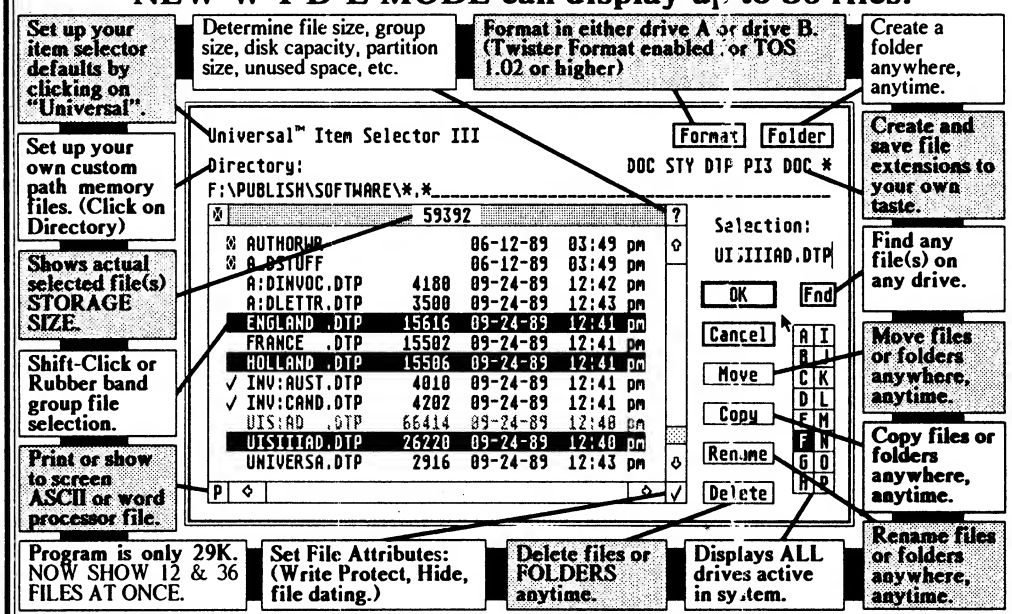

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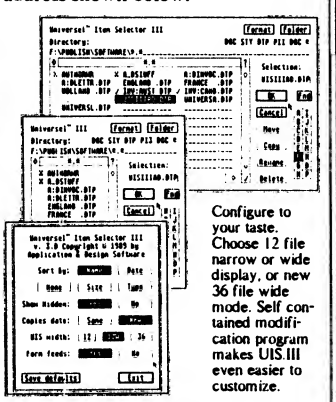

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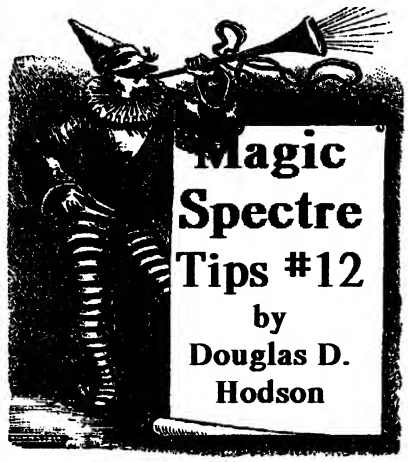


PostScript Fonts

Thanks

Last month's Magic–Spectre Tips column was produced entirely with a *Spectre GCR, Microsoft Word, PageMaker, FreeHand, UltraScript* and a HP Deskjet. While producing this column may seem almost completely "computerized," type it in, draw some fancy artwork, page layout, then finally a print out. The one aspect that cannot be "computerized" is proof reading. Oh, yes, I reread what I type (believe it or not) and yes I do catch mistakes, *but*, making it sound good is an art. I really never realized how valuable good editors, such as Joe and Joyce Waters can be. So I must say thanks.

Text and Graphics

As mentioned in the past two columns, PostScript is a language for describing pages of text and/or graphics. Notice how we write "text and/or graphics" as if they are two unrelated entities. This perception exists because of the way "old" dot matrix printers handled text and graphics. The information for printing text is built into these printers. Printing graphics was always a special case as discussed last month.

PostScript only understands how to draw lines and curves. Sounds pretty rudimentary doesn't it? If you think about it, (this is not a thought question) text is nothing but a bunch of lines and curves drawn to form a letter. After the outline of the letter is drawn, a PostScript command is used to fill it in to make it look solid. Trying to distinguish between text and graphics in PostScript is silly. PostScript text is simply graphic objects drawn to look like letters. All PostScript operations are graphic in nature.

Font Dictionaries

If we attempted to draw all of our text manually with PostScript's line and curve commands, we would probably never get this sentence printed! PostScript does provide a number of built–in commands used exclusively for drawing text on the page. These commands reference a "dictionary" of information that contains a description of how to construct the text. Can you guess what we call this dictionary? How about a "font dictionary!" The PostScript interpreter uses the font dictionary to draw each character.

If you want to print text with a certain font, you had better make sure the PostScript printer contains the dictionary required to draw it. Every PostScript output device has some fonts that come with it, or are built–in. At a minimum, all PostScript–equipped devices have the Times family, the Helvetica family, and the Courier family. If you try to draw some text on a page in a font that is not available, the interpreter will switch to a default font. You will also receive a message from the interpreter indicating that the font you selected is not available. There are always exceptions though.

LaserWriter Fonts

All PostScript printers are shipped with at least the three fonts mentioned above. The Apple LaserWriter (depending upon which model) includes several more. See the figure below for a list of the fonts available and an example using the font.

Like all fonts used in the Macintosh system, we need to install the corresponding screen fonts so that we can select them in Macintosh applications. Screen fonts are installed using the Font/DA Mover program. When you buy a LaserWriter (as if you're going to) these screen fonts are included.

LaserWriter Fonts

Font Name	Style
Avant Garde	Current Notes
Bookman	Current Notes
Courier	Current Notes
Helvetica	Current Notes
Narrow Helvetica	Current Notes
New Century Schoolbook	Current Notes
Palatino	Current Notes
Symbol	Χυρρεντ Νοτεσ
Times	Current Notes
Zapf Chancery	*Current Notes*
Zapf Dingbats	✢✦❖❒❒❄■▼ ★❒▼❄▲

UltraScript Fonts

You may wonder how the installation of LaserWriter screen fonts is going to help us. After all, I'm a poor ST owner with a GCR and HP Deskjet. Why would I use LaserWriter screen fonts? If we back up a moment to the part about the three fonts that are supplied with PostScript, it will all start to make sense.

The standard UltraScript package supplies the three fonts: Times, Helvetica, and Courier just like any PostScript printer. But you can expand the UltraScript dictionary of fonts by purchasing additional font packages. The first package to purchase would be Package 35. This package includes ALL the LaserWriter fonts!

This means we can use all the standard LaserWriter fonts with UltraScript! I find this very convenient. I can produce (extremely good) "draft" prints with my system using ALL the LaserWriter fonts, then produce a final print on a LaserWriter. I can do all of this WITHOUT doing font conversions!

Screen Fonts

So far I have brushed over the term "screen font." Exactly what is a screen font? A screen font is a description of what the characters in a given font look like for display on a monitor. This description is completely different from the PostScript description discussed earlier. This description uses the now "old fashioned" method of bitmaps. Each character is described by a matrix of bits. When the computer needs to display a character, the bitmap is copied from memory to the screen. (We may be getting a little detailed here, but hang on.)

This method of describing characters is very limited. In fact, it should be obvious (for programmers) that when a different point size is selected, a different bitmap must be used for the display on-screen!

Tying It All Together

We now know that printer fonts and screen fonts are different animals all together, at least in the PostScript world. (Note: In the world of dot-matrix printers, screen fonts are used in the printing process.) Screen fonts are added to the System file by using the Font/DA Mover. After the font has been added, it will appear as a valid selectable font in all Macintosh applications. The actual printer font is stored in the laser printer, or in the case of UltraScript, the printer font is kept on the hard disk (on the ST side). You *need* the LaserWriter screen fonts so that the font can be selected in the first place.

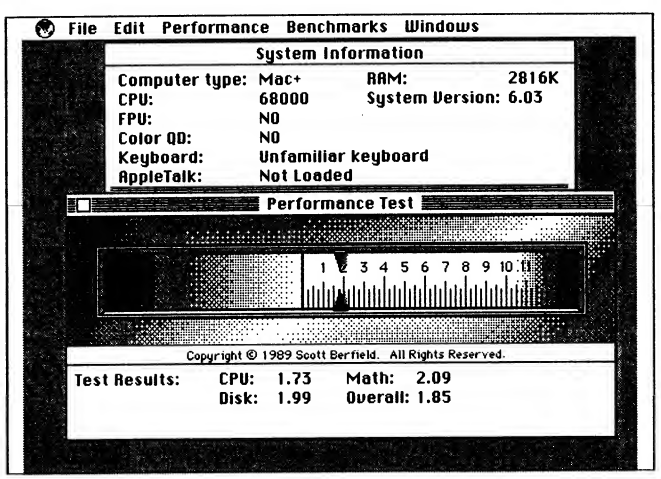
If we select a font style in a program such as PageMaker, the generated PostScript file will contain a reference to the selected font. When the PostScript interpreter sees this reference it will attempt to load the font dictionary associated with that font. If that font is not available, a default font will be used (UltraScript defaults to Courier).

Next month we will discuss Laser Prep, Aldus Prep and possibly MultiFinder depending upon when I receive version 2.65 of the Spectre software (the ball's in your court Dave, *grin*).

New Spectre CN Library Disks

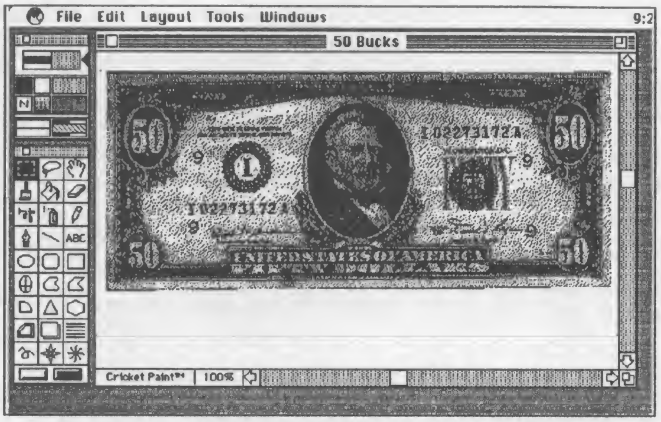
by Jeff Greenblatt

This month, *Current Notes* is releasing five new PD and Shareware Spectre compatible (128K ROMs) library disks. For those of you using the Spectre with 64K ROMs, I recommend the excellent CN Magic library listed elsewhere. If you like and use any of the files, don't forget to make your shareware donation(s) to the author(s). Here is a rundown of what each of the new disks contain:



Disk S57, Utilities #8, contains 5 new utilities. They are a demo version of Complete Undelete with docs, Disinfectant 1.6 with docs, FunKey with docs, **Speedometer 2.51**, and SysErrTableDA 2.5.

Disk S58D, Clip Art #1, contains 66 pieces of scanned image clip art. They are **50 Bucks,** Art Nouveau Border, Bones, Border Thick, Brooke, Canfield 1.0 Deck, Card, Chief Petty Officers, Clip Art, Cutter, DC9, Desert, Desertrain, Doctators, Disk Back, Disk Front, DK1art, ExorGirl, Eyeglasses, F-16, Fancy Border, Fonebone, Food, GE Logo, Ghostbusters, Gorilla, Greyhound, Ham Radio, Home Video Library, Icon Collection, Jack of Spades, KEN1, Koala, Mac VS Mac, MacArt, MacScrapes, MacWife,, Madonna, Mercedes, Mercedes 190D, Minmay#5, Minotaur, Mouse-



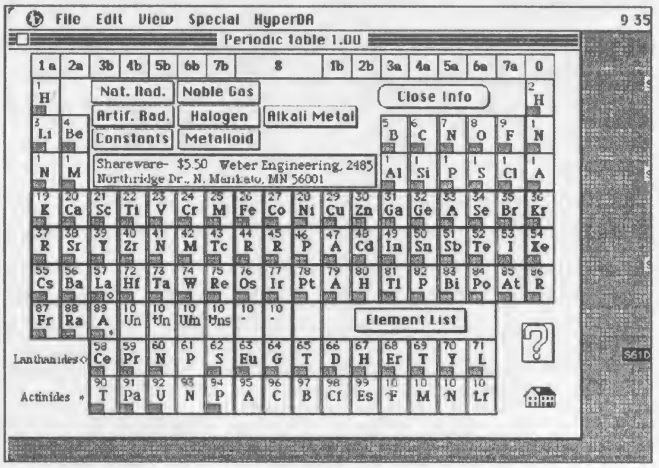
Trap, New GreyScale, Octy, Orate Borders, Pay Check, Pheasant, Pitcher, Plate Setting/Hourglass, Projector and Screen, Retirements, Runner, Scan 5, Set Design, Shark, Skeleton, Sneaker, Splinter, Steve Jobs, Tool-box, Traditional Borders, Treasurer's report, Vermont, Weapons 2, Woman, WR-MAn with Hat.

Disk S59, Sounds #5, contains some new and updated sound related programs and resources (some even talk). They are Beam Up, Dog Do, Life Sentences! and Docs, Mr. Ed, Soundmaster 1.3.1 and Docs, SuperPlay 4.0 and Docs, Zippy 2.0 and Docs, and MacinTalk (required for those programs that talk).

Disk S60, Postscript Fonts #3, contains 5 new fonts for use with Spectre to create postscript files to be printed out using Ultrascript. The fonts are Calligraphic Sample, Chester, Deuse, Louisville, and Rodchenko.

Calligraphic Font
Chester Font
DEUSE FONT
Louisville Font
Rodchenko Font

Disk S61D, HyperStacks #5, contains 6 Stacks for use with HyperCard. They are Clip Art Sack 3, Crypo-Slate 1.50, Little Black Book, **Periodic Table 1.0**, Quick Compactor 2.0, and SetVersion XCMD 1.0.



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Atari Portfolio:
Brain Expansion
Patricia H. Troy (c) 1989

For weeks my son, David Troy (you may know him as Dave of Toad Computers), had been talking about the Portfolio. Of course, he talks about a lot of products; most of which I don't need. Frankly, the Portfolio sounded more like a toy or one of those electronic notebook gadgets for yuppy executives than it did anything serious.

One evening a couple of weeks ago David brought home a Portfolio. When I tried it, I suddenly realized that everyday life would never be quite the same (only a slightly exaggerated claim). I had to try it out for a day or two. When David wanted it back, I simply couldn't give it up. I had to have it! Thank goodness for Visa.

What you must understand is that I am no computer addict. I am a 43 year old self-employed publisher, wife, and mother. David tells his friends that I am 80% computer illiterate. Actually, I am not all that bad, really. I can use word processors and spreadsheets rather competently, thank you.

The Portfolio is ideally suited for me. It contains a beautiful little word processsor, a very competent Lotus style spreadsheet, a handy diary/calendar, an address book (data base), and a calculator with a wonderful display. It even has something called Clipboard which allows you to transfer data from one format to another. It does everything I usually want to do, and, it seems to do it quicker and easier than my old CP/M machine or my fancy new Atari Mega ST 4. Admittedly, however, my needs are rather simple. Still, in the two weeks I've had my Portfolio, I've made a few interesting discoveries and done some exciting things.

Taking notes on the Portfolio is an incredible experience. I took it with me to a conference last week and used it for all my notes. It was spooky. I felt like I was actually inside the brains of the speakers. If only I had had this in college! Maybe I could go for a doctorate after all.

I had to do a slide presentation covering the conference I attended. Despite the fact that I have done dozens of such shows, I have always found them frustrating, because it is such an iterative process. Once again my little friend, the Portfolio, came to the rescue. I wrote the draft of the script on the plane. When I got the slides back, I spread them out on a light table. Then, it was so simple to read through the script, selecting the slides, modifying the script, and noting the slide changes. I could do all this while holding the computer in my hand. Never have I done a presentation so easily and quickly.

One of the duties which I hate is grocery shopping, especially with coupons. Any shopper knows how difficult it is to manage a grocery list and a stack of coupons. Then there is, of course, the guessing game about the total.

For a week or so (I go to the store every couple of days) I've been keeping a grocery list on the Portfolio's word processor. Tonight I did something special. I used the spreadsheet. No, it wasn't a BIG deal! All I did was make my grocery list and add a column for coupons. As long as I had gone that far, I added another column for price. In the final column, I plugged in a formula to subtract the value of the coupon. When I was ready to check out, I knew what I had and had not bought, and just how much it all would cost me. Armed with this total, I knew I had to stop at the ATM before paying. The best part of the whole experience was being nonchalant when I encountered a friend who stared at the small device in my hand, but said nothing.

Yes, I am also using the address book, the calendar, and the calculator. They are just plain useful. You might think that they would be too gimmicky to be good for much. No way! They are great!

Some people have quesioned the 40-column display. I did before I used it. Now I love it. You can choose to run the machine set for 80 columns and use a 40-column window to move across the screen. Reformatting is so easy that it just doesn't matter how wide the display is. This new arrangement is light years beyond the old Atariwriter on the 8-bit machines.

What about the MS-DOS? I am no IBM lover, but the MS-DOS is simply no problem. The Portfolio is unusually user-friendly.

"But the keyboard is so small," you say. I thought it was too small to type on until I used it. Really, it is very easy to use. I think I am as fast on it as on anything else. I started this article at 9 p.m. and it is now 10 p.m.

A machine to which you entrust your schedule, appointments and your friends' phone numbers had best be reliable. The Portfolio runs on three AA cells or an AC adapter. It gives a low battery warning and does not crash your data. You have some time to get new batteries.

With the 64K memory cartridge, there is plenty of room for almost anything you would want to do. It feels like a very fast hard disk. Between the cartridge and the built-in memory, you have something that acts like two disk drives.

I find that much of what I do, I prefer to keep on the Portfolio. Still, when I want to, I can transfer data onto my Mega and thus out onto my SLM804 laser printer.

Marshall McLuhan was fond of talking about "media as extensions of man." The Portfolio is a revolutionary extension of the human brain. It is the first truly personal computer. It is as personal as a toothbrush. Just imagine, a computer you can take into the bathroom with you.

David and I both have our Portfolios and use them daily. I rather suspect that soon my husband will have to have one also. How about you?

The Junkyard Pussycat

by John Barnes

Mutant Ataris

A biologist friend called the Junkyard Pussycat the other day and said, "I think I have a mutant Atari ST!"

The Pussycat was astonished and asked his friend, "What do you mean by 'mutant'?"

The biologist said that some of his applications were running into crazy little glitches that he hadn't seen before. Upon further questioning, I discovered that he had just installed a new set of version 1.4 TOS ROMS after upgrading the memory on his 1040 ST to four megabytes and he had finally gotten around to installing a couple of desktop control programs that he had bought a while back. Indeed, his machine had become a different beast.

When his friend said that *STARTGEM* was misbehaving, the Pussycat pointed out that the new TOS 1.4 provides a better way to handle that particular piece of business. The Pussycat also pointed his friend to the add-on files for TOS 1.4 and gave him a document that contained a few more facts about the new operating system. It seemed that the dealer had neglected to provide these. The friend was also told to lay in a new copy of *Superboot* and to get updates for his copies of *Neodesk* and *Hotwire* if he really wanted to use them. After all, the biologist had transformed his machine from a pony into a workhorse and he might as well use tools to match the pedigree.

How Many Kinds of ST's Are There?

After his friend rang off, the Pussycat started thinking about the mutant angle. Changing ROMS and adding memory certainly make a computer into a new animal. *Moniterm* boards, accelerator boards, and *Spectre GCR* cartridges are just a few of the other kinds of implants that change the character of an Atari ST. After all, people install such things because they want to make their machines better. To the extent that they affect the basic character of the machine and its responses to all applications that are run under the changed conditions, these alterations can, indeed, be thought of as "mutations."

Aside from such drastic changes of character, there are the subtler matters of different ROM sets, different host adapters for hard disk drives, and, as Bill Teal has learned to his consternation, different ways to arrange the innards of the machines. Factor in different power supplies and different floppy disk drive mechanisms and the number of possibilities for mutations from hardware alone starts to grow out of sight.

Atarians are far from alone in confronting such mazes. The multiplicity of graphics boards in the MS-DOS world is a continual source of consternation. Apple's Finder for the Macintosh is continually being revised. Much of the heft of *PC Week*, *Byte*, and *Mac User* is accounted for by ads that promise wonderful new vistas for buyers of add-ons.

Change is, therefore, a fact of life when dealing with computers.

Software Mutations

The use of software to modify the character of computers is perhaps even more widespread. Tools like *Universal Item Selector*, various ram disks, print spoolers, *G+Plus*, *Multidesk*, and a host of other items that inhabit auto folders and desk accessory slots allow Atari owners to customize almost every aspect of their machines to their own taste. That things work as well as they do is a real tribute to those developers who learn the rules and follow them.

Bad Seed

These myriad possibilities for mutations in the computer population create plenty of opportunities for failed experiments. Software authors resent the plodding pace the machine sets for their work. They have to invent their own ways to make screens scroll faster, to draw lines, or display their own styles of dialog boxes.

Such individualism can spell trouble, particularly if it flies in the face of good programming practice, which dictates that those who want to enhance the software environment should do so as unobtrusively as possible so as not to interfere with the workings of other programs.

In fairness to software developers, it must be noted that they are often shooting at a moving target. By the time their programs are put to work, the systems in the real world may have mutated in unanticipated ways. Real users also have a knack for finding loose ends that cause programs to crash. Everyone has seen programs that go through a succession of revisions until they settle down (or until they become obsolete).

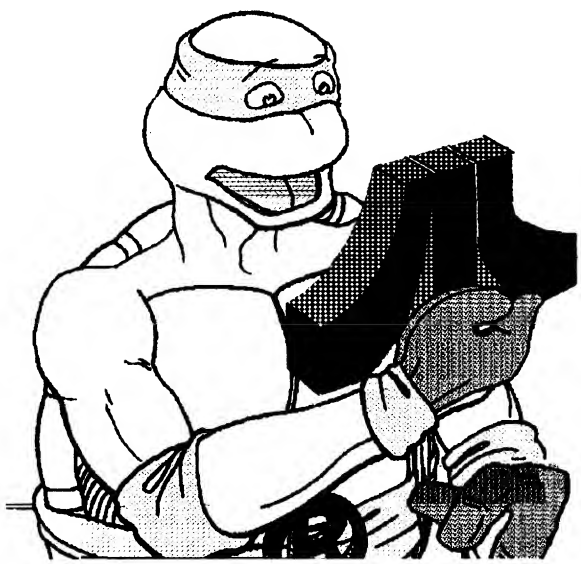
The problem of an inadvertent bad seed may be especially acute in the Atari marketplace, which is too small to be of interest to professional (read well-paid) software developers, who supposedly have the time

and the discipline to understand the rules, to try to live by them, and to fix their mistakes. Atari Corporation also bears some of the responsibility because its mechanisms for disseminating information on programming rules, standards, and practices leave much to be desired.

Coping

Take all of the possibilities for hardware add-ons, stir in the honest mistakes of systems engineers, and fold these together with the ingenuity of program developers and you have a recipe for unexpected events, which look like disasters to the person who is trying to get some work done. The machine seems to become an alien with a perverse mind of its own, a mutant Atari.

Fortunately, there are a couple of practical steps that everyday Atari users can take to keep these lurking demons at bay. The first step is to practice awareness, take nothing for granted. The second is to arm oneself with a strong skepticism, play it conservatively. Finally, keep it simple, use only what you need.



Know Thy Beasties

Awareness means knowing what all the pieces are. What do the various items in the AUTO folder do? Are all the desk accessories really necessary? What do the options in the booting software for the hard drive mean and how should they be set up? Are there extra pieces that have to work right? Alternative desktops like *NeoDesk* and *Hotwire* are really shell programs. Do they truly stay out of the way of running applications? These shells commonly require set-up files. The user of such programs should make himself familiar with the setup files to make sure that they do not contain hidden assumptions.

Any item that fails to pass muster on the awareness score should be set aside until the need for it becomes really pressing.

Superboot is an outstanding example of a tool for enhancing awareness. Each setup that the user constructs with this tool is a coherent, identifiable environment. The pieces that go into building it are explicitly identified and they appear at bootup time to remind the user just what kind of havoc he may be wreaking. *Superboot* is primarily a tool for hard drive users, who need to change environments more frequently.

The DESKTOP.INF file under TOS 1.4 provides an advanced user with most of what is needed to configure a floppy disk to provide self booting disks that allow other users to do useful work without staring blankly at the desktop. The ability to automatically start a GEM application cleanly represents important progress.

Multidesk is another fine tool for hard drive owners because it allows them to build coherent collections of truly useful desk accessories for various situations. Floppy disk users can control this by being selective about the few accessories that they will be able to copy onto the boot disk. Both kinds of drive owners need *AUTOFOLD* to sort the files in their AUTO folders into the correct order, because some programs must run before others.

The Life of the Skeptic

Skepticism implies treating each new candidate for the AUTO folder, the accessory list, or the desktop as an interloper that must establish a clear-cut right to be where it is. Any user who lacks the time to put a candidate program through its paces would best avoid being the first kid on the block to install that great new mouse accelerator (file selector, disk cache, etc....). Rave reviews in magazines should be taken with a grain of salt because these people often write their material before they have had a good chance to get burned. The experience of other users is the best guide. Local and national bulletin boards are full of references to people's experiences with new products. User group members (especially the disk librarians) are also valuable sources of data on experiences with new and old products.

The Junkyard Pussycat will no longer buy version 1.xx of anything. He can do without new products until they prove their fitness to survive by remaining on the market for more than three months in stable versions. Whenever he is tempted to disobey this rule, he glances over at his box of 100 or so distribution disks for products that have failed to make it. As for public domain software, the Pussycat rarely downloads anything that he does not actually need. Friends are always passing him PD stuff that they think deserves a closer look.

Some people will say that the Pussycat is taking his "nasty pills" again. Far from it. He is as enthusiastic

about good products as the next user. Experience has, however, shown that a measure of patience pays off in saved time and aggravation.

Atari consumers seem to be learning this because they are not rushing out to buy the latest replacements for their old software until these become well established.

"Survival of the Fittest" is as important in the computer world as it is in the biological world. Those programs that fail to perform properly should be purged from operating disks at the earliest opportunity. The Pussycat's hard drives have special folders for "JUNK" that serve as reminders of past follies. There are other folders for "OBSOLETE" material that has been superceded by newer and better products.

Conversely, those programs that perform well should be nurtured and their characteristics understood. They should be given every opportunity to strut their stuff. Feedback to the developer on such products is usually worthwhile because programs with survival value get the kind of attention that keeps them going.

Dealing with the "Gotchas"

Sooner or later any serious user is bound to encounter a piece of software that just doesn't like the environment it is running in. If the product is attractive enough it is worth spending some effort to find out whether one is dealing with a bad product or a bad environment. In order to make this determination, one should strip out everything that isn't needed. Create a "plain vanilla" environment. Any product that is worth anything at all should work in such an environment because it is the one that is officially supported. If the product fails to perform under these conditions, consign it to the JUNK folder.

Once the product is validated for a plain vanilla environment, it is time to think about dressing it up for more comfort and ease of use. Selectively add in environment features such as shells (*NeoDesk, Hotwire, etc)*, operating system patches (ramdisks, print spoolers, *G+Plus*, *Item Selector,* etc), or desk accessories one at a time until encountering the mutation that causes the application to crash. The information gained in this way lets the user decide how important it is to hang on to the application or the environment. If the application is important enough it can be run from a suitably accommodating environment through creative use of *Superboot* (in the case of hard drive owners) or from its own properly configured floppy disk.

It is important to be rigorous and open minded when following this "field stripping" procedure. Nothing can be labelled as beyond suspicion. It is desirable to be utterly specific in identifying an incompatibility. Developers like to point fingers at each other when something crashes and the poor user gets caught in the middle. Careful diagnostic work builds confidence that the fixes are satisfactory.

Keeping It Simple

The best way to avoid monstrosities is to keep one's system simple. Unless an add-on offers a real advantage, forget it. Before putting in a new add-on, consider how intrusive it will be. Think especially hard about those add-ons that cannot be easily undone. The cartridge port of the ST is a nice feature precisely because disabling any add-on that uses it is a simple matter of turning off the machine and unplugging the cartridge. *Spectre GCR* is perhaps the most elegant example of this approach.

Before installing any software designed to speed up the system or make it easier to use one should perform some benchmark testing. If the increase in performance is only marginal, it is wise to wait for something better to come along.

Improving the Breed

The Atari market is mature enough so that it is time to take stock of the vigor of the hybrids that are out there. Perhaps someone (Atari Corp or the developers' association) could make a special effort to wring the last few bugs out of some of the best software add-ons and give them a special seal of approval. The resulting collection could perhaps be packaged as a single product for new users and old ones who are upgrading their systems. The Pussycat would probably buy such a thing if it cost less than $100 because he is getting a little tired of keeping track of the update status and incompatibility problems among the 20 or so add-ons that he currently uses.

Atari systems running such a package will certainly give a better account of themselves than ones that remain restricted to the original way of doing things. Such an "Atari Software Power Pack" might also be valuable in penetrating the business market, where there is little patience with tinkering.

Atari ST's have evolved since their emergence, largely through the efforts of developers who have added capabilities that make the machines functional and attractive. It will be interesting to see what these people will be able to do if they ever get new hardware to work with.

Friendly Mutants

For the most part, the mutations we introduce into our machines are benign and accomplish what they are supposed to. There is no need to be fearful of new products if one uses a modest amount of discrimination in choosing upgrades and add-ons. The Junkyard Pussycat's machine must look like a wild beast to less adventuresome Atarians, but it is really just a spirited animal ready to give its master an enjoyable ride.

ST HARDWARE

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2 Meg Upgrade INSTALLED	$399.99
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Stuck in a Rut

by Sam Wright

Dr. Doom's Revenge

Another variation of the action adventure game is the all-action game, involving arcade sequences to accomplish a goal.

Hmmm...that definition pretty much qualifies any arcade game at all, eh? Somehow it sounded closer to the truth before I wrote it down. Truth be told, folks, we're stuck in a rut of our own. There just aren't as many adventure games being published as there were a couple years ago. If you really want to get down to it, there aren't as many adventure games for the ST as there once was. It seems that along with Infocom went the rest of the genre, leaving us with the play-it-once-and-shelve-it-away arcade games billed as action adventures. But we know better, don't we?

(Note that I'm purposely leaving out role-playing games. I'm a die-hard four-format (see previous columns) adventurer and haven't yet been convinced to add a fifth. Setting the initial character attributes in *Beyond Zork* is about as far as I'll go in playing an RPG. My by-the-book adventures require thinking without preparation.)

Thus, just this once, we'll take a break from the adventures (while hoping something new and revolutionary will come along next month) and cross over into the arcade/adventure genre. So dust off those old, faithful Atari joysticks and let's begin!

Paragon Software's *Dr. Doom's Revenge* ($39.95, all color STs) nicely blends adventure and arcade into an "interactive comic-book adventure." First things first, you'll want to install the two-disk game onto your hard drive. Each of the comic strips, screens, and villains is loaded from the disk. The amount of time you'll save waiting around will be well worth it, not to mention the wear and tear you'll save on the original, copy-protected disk. On to the story!

The evil Dr. Doom (his name shouts for an ominous adjective) has stolen a nuclear missile from the United States and intends to launch it straight at New York City if the U.S. doesn't cooperate and become a colony of Latveria, the gypsy camp of sinister Doom's.

The President is relying on you, in the guises of Captain America and Spider-Man, to stop sinful Doom and his warhead before something nasty happens, like, oh, the sinking of North America.

Well, okay, the plot is a bit farfetched, but what do you expect? Would President Bush call on two major superheroes just to find 20 lost treasures in the basement of an old, abandoned house?

I've long been a fan of Captain America and Spider-Man, both in the TV movies and comic books, particularly because they're easy to relate to. The comics never treated them as the absolute superheroes they were; instead, they had familiar, everyday problems that made them more human, more down-to-earth. The comics were also largely responsible for increasing my vocabulary (Marvel Comics always came through with at least one word that would inevitably send me scrambling to the dictionary). So you can imagine how fast I snatched up the opportunity to play the roles of not only Captain America, but Spider-Man, too! As usual with high expectations, though, the gameplay doesn't live up to the initial idea of the pairing.

The best part of the game is probably the documentation. A 16-page comic book "destined to be a collector's item" sets up the premise and gives you a quick rundown of the events leading up to where you begin playing. The instruction manual not only has information on how to play the game but also contains intriguing biographies (real name, height, weight, strength, weapons used, history, etc.) of the heroes and villains (which you'll later be multiple-choice quizzed on at boot-up as part of the documentation copy protection), an introduction from Stan "The Man" Lee himself, and a history of Marvel Comics. Admittedly, this is doubtlessly more self-promotion than anything (a half-off coupon for up to six Marvel comics subscriptions is included), but the readings are entertaining and give you a feel for what's in store.

The game opens with a comic strip revealing your identity (Cap or Spidey) and your upcoming fight either with a supervillain or against a series of inanimate objects, called the superhero challenge. After successfully completing the battle, question marks, which fill the remainder of the strip, uncover future battles. Once the strip has been completed, you're transferred to the other superhero and battle his set of villains. The process cycles until you or wicked Dr. Doom are killed.

(Of course, "kill" here is a relative term. Captain America and Spider-Man would never intentionally kill another being, human or otherwise. Just so you can sleep tonight...)

Sounds good so far, right? Here's where it flubs. Once "inside" the comic strip panel, the fights will largely be the same against all the characters. Captain America is at his best throwing his shield underhanded and hitting overhanded, and Spider-Man is at his best shooting his web. Using only these strategies (at the right moments) will get you through the entire game all the way from the robot to the nefarious Dr. Doom.

To be fair, each supervillain differs in appearance and does actually move differently. You'll want to duck Oddball's spheres, Boomerang's 'rangs, and Electro's bolts, and you'll want to stay clear of Grey Gargoyle's stone-casting right hand, Rhino's horns, and Machete's knives. Hobgoblin is the most fun, since he's flying on his goblin glider (everyone else is grounded), throwing pumpkin bombs down at you (as Spider-Man). A few leaps and punches to him will put him out of commission. Keep an eye out for the undocumented mystery guest who pops up at Captain America's final session.

Rhino Pounces on Captain America

As for the malicious Dr. Doom, he may not have nine lives, but he has a habit of rising from the dead.

There's practically no variation in controlling Captain America and Spider-Man. Captain America has his shield; Spider-Man, his webs (confined to 100 throws, more than enough to complete the game). They might as well be the same person. In Spider-Man's superhero challenge, the controls aren't as responsive, usually requiring two or three pushes before he moves.

Both the superheroes and the supervillains begin with a full supply of energy, which drains each time one's hit. The object is to pulverize your opponent until he has no more energy left. Your level of energy is held over from panel to panel (and even strip to strip). At a certain point, you'll be granted extra energy. Once your energy dissipates, the game's over. You don't get a chance to continue battling the supervillains as the other superhero. New York City explodes and the vicious Dr. Doom triumphs. Game over.

Does this whole concept somehow sound familiar? Energy levels on the hero and villain, a battle until one's energy dies, a progression to a similar battle with the next villain, a cut to jumping over and ducking under obstacles? You bet it does. It's the same trite stuff we've come to expect in all-action "adventure" games.

Fortunately, you don't have to play the game in one sitting. You can save the game at any of the strips, ponder just who it is the infamous Dr. Doom is seeking revenge on, then resume playing.

To maintain the integrity of Captain America and Spider-Man, let's hope the forthcoming motion pictures of each fare better.

E. ARTHUR BROWN

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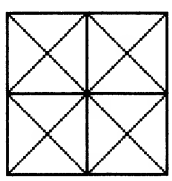

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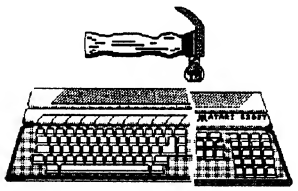

If You Can't Join'em, Lick'em

What to Do with Your Underage Game Addicts

Some of my friends whom I have talked into buying ST computers complain that their kids (ranging from 8 to 20 years of age) spend too much time playing computer games. "Had I bought a PC clone, I would not have this problem," I have heard, "the kid would not touch the machine for all the money in the world!"

The truth is, you can't fight it; it is hopeless. You may only hope that the game addiction will burn itself out, which will happen quite by itself, sooner or later, usually before your child turns 65 years old (although males tend to have relapses). In the meantime, you can at least make the best of the situation by steering your next of kin in the direction of games which will not harm his/her mental development. Some of those may even have considerable educational value. Want an example? Here it comes, but let me do some digging in history first.

In the Days of Hammurabi...

Back in the heroic times of paper tape, punched cards, magnetic drum memory and text-only output (printer, of course, no CRTs!), when a mainframe computer with 64K of memory needed a staff of six to just keep it running (and to show it to school kids on field trips), some people were already laying the foundations of the computer gaming revolution. Instead of programming the process of neutron diffusion or something equally exciting, they were writing and playing games. Some even lost their jobs for it--no revolution is without its martyrs.

One of those early games was *Hammurabi*, possibly the first of the class known as *limited resource management simulation* games. You were playing the role of a ruler of a small state somewhere in Mesopotamia. You had at your disposal some serf subjects, some arable land and some grain. Each step of the game corresponded to one year, and each year you had to make a decision how to use the resources at hand.

You could use your grain to acquire some new acreage, to feed your people, or to sow the next year's harvest. You could also sell land to buy grain. Simple numerical relationships were governing the dynamics of the process: one peasant could take care of a given area, a given amount of grain was needed to feed him, etc. The harvest was, within some limits, randomly changing from year to year.

Thus, you were sitting at your teletype, typing in answers to the prompts, and watching your mini-kingdom prosper, starve or revolt. It was quite exciting--then.

Countless versions of this game abounded; you could write your own after playing the original once or twice. As recently as 1981, I also wrote my own for the Radio Shack PC-1 pocketcomputer. Can you imagine programming a game with a whopping 1,424 bytes of RAM at your disposal (bytes, mind you, not kilobytes)? Still, when you sit in the Moscow airport, and you do not know how long you will be there, and your reservation to Tashkent has mysteriously disappeared from all records, then you would program even in machine language in 200 bytes! How sad the Atari Portfolio does not have a built-in BASIC! Aaargh!

Millenium 2.2

Now here we are in 1990 and some programs on our home computers will barely run on one megabyte of memory. And here comes this hot European game, *Millenium 2.2* from ???, and it just happens I have nothing better to do but play it.

And who said *ST Toolbox* has to focus on programming tools, various utilities and such stuff? Let me share with you my impressions on *Millenium 2.2* as a present-day limited resource management game, so that you will have a pretext to buy it for your kids and then to play it yourself.

The game is very much like *Hammurabi*, but, as you would expect given twenty-five years of progress in computer hardware and software, more complicated, deeper, more addictive and much more fun to play.

The initial scenario is not so funny, though. Something went wrong with *perestroyka* and Earth became uninhabitable because of radioactive contamination. Now the year is 2200, you are the commander of the last outpost of humanity--a small base on the Moon with a hundred people, modest research, mining and production facilities, one small solar energy generator and no spacecraft at all. Your ultimate goal is no less than to rebuild the civilization.

Yet you cannot build, say, a spacecraft, until your research department provides you with a design, until your raw material supplies are adequate, and until your energy supply is large enough. Thus, you have to build a better energy generator first. For some useful gadgets you will need

materials not available on the Moon, so you have to look for them elsewhere in the Solar System. To get there you will need a spacecraft. Depending on where you want to send it, the round trip may take even more than two years. Yes, this is, indeed, a limited resource management game.

As if you needed more troubles, it turns out that you have some nasty neighbours. The Martian colony also survived, and from time to time they come and bomb you into dust. A fleet of fighters or a nice battery of orbital lasers would come in very handy. Where do you find that uranium thing you need to build lasers?

With time you will be able to build larger spaceships, capable of establishing colonies on some moons, and those colonies can supply you with vital resources--if you keep your transportation lanes open and colonies defended. And finally, if you succeed in wiping off the Martian supremacists and make the Earth suitable for human life again, you will be rewarded with a screen of rolling fields with some soothing music. This will require some hard work, though.

User Interface, Graphics and Sound

The designers and programmers did a good job with the user interface here. With so many various pieces of information (for example, all the research files, numbering close to two hundred) and with so much decision-making involved, the job was not trivial.

Nice, if not spectacular, graphics constitutes a mood-building backdrop for the mouse- and icon-driven user interface. Some simple, but well-executed, sound effects and backgrounds are also included. Clicking on various icons or picture elements moves you around the place, recalls pieces of information and makes decision choices. The user interface is, with minor exceptions (like somewhat inconsistent use of the mouse buttons), very good and does not require much learning, allowing you to concentrate on the subject of the game.

You may zoom out to the grand view of the Solar System. Then clicking on a planet will zoom in to show that planet and its moons. Clicking on a moon will show it in a still larger scale together with the spaceships on its orbit (if any). Then you may click on a spaceship and you will find yourself in its cockpit, from where you can set a destination or start the landing procedure.

Similarly, clicking on the manufacturing dome of your colony will get you into the production plant. There you can activate a computer screen listing all the goodies you can attempt to make (i.e. those for which your eggheads have completed the research). If you choose an item for which you do not have enough resources, the computer will tell you so (with a listing of the missing materials and the required quantities). You may then go to your moon/planet database and check where the missing stuff can be found (assuming that you have done enough planetary research, again). Then you may send a ship to bring it home--if you have available transport ships, that is--check the ship roster. Even if you have a spacecraft, this will take time and you do not want to have your plant idling, so back to the research database to check what you can manufacture now, with the raw materials at hand. And so it goes *da capo al fine*.

All this is easier to do than to describe. After twenty minutes you will be moving around easily, with your kid looking anxiously over your shoulder and demanding a part of the fun (remember, you haven't bought the game for yourself!)

Complaints

There are very few complaints I may have about *Millenium 2.2* (and I can't say *this* often!) The worst thing about the program is that it runs only in color. Too bad, with monochrome monitors finally being appreciated on the U.S. market, many of us may not have a color monitor.

The game contains (with the single exception of brief dogfight sequences) no animation or special graphic effects, so making it compatible with both color and monochrome display would not require much cost or effort.

Educational Value

The game is quite addictive and will provide the player with ten to twenty hours of educational entertainment (yes, you can save a game in progress). Educational, you will ask? You mean, astronomy, orbital dynamics and such?

No, not at all. The facts on the planets, moons and their resources are taken mostly (with exception of the orbit locations) from the ceiling. This does not matter. On the other hand, *Millenium 2.2* will be a useful tool in demonstrating the problems of management and scheduling, and in developing the related skills.

If you have a child between 11 and 16 years of age, buy *Millenium 2.2* and let him/her do some learning under the pretext of playing games. An eleven-year old may need some help at the start, but you will find it enjoyable (maybe even too enjoyable, again, remember for whom you've bought the game!) If you do not have children in this age bracket, buy the game anyway--don't you deserve some fun yourself?

Do Something Different This Time...

A few months ago I was complaining about the life of a program reviewer. Recently, I have come to suspect even more that I've chosen a wrong area. I think being a food critic is much more fun. I can't wait for our Publisher to start the *Food* section in *Current Notes*. Remember, Joe, this was my idea!

Why suddenly about food? Well, recently I made a great discovery: this small and very homey

German restaurant in Mayo, MD (take Route 214, i.e. Central Avenue, east and when you reach Mayo you will see the **Old Stein Inn** on your right). The place is worth the trip! The *Old Stein Sampler* (three different meat dishes in one, served with German noodles) is something to start from. Other stuff also deserves one's attention. And, of course, they have the Dortmunder on tap, both light and dark.

This is a 35-minute drive from the Beltway (or 25 minutes if you are not on probation), but good things don't come easy. You may call Old Stein, (301) 798-6807, just to make sure I am not pulling anybody's leg, which I sometimes do.

I needed this piece to stake my claim of being the food critic in *CN* (and to beat some other guys to it, eat your heart out, Don!). Now I am expecting the local restaurant owners to start sending review samples c/o *Current Notes*--or just call me, I'll drop by. Isn't life great?

CN EXCLUSIVE:

ST Emulator for the PC?

In an unexpected turn of events, an ST emulator for the PC and compatibles was announced in Europe in the beginning of February. Under development since late 1988, it is aimed primarily for the West German market, where Atari ST outsells all other brands of computers and some PC users would like to have access to some pieces of ST software, outperforming their PC equivalents for a lower price.

The emulator has been developed, of all places, in Warsaw (remember, that is also where *LDW Power* and *LDW Basic* come from) and is marketed worldwide by the well-known German Komputersaftwarenprogrammierunggesselschaft (KSPG) publishing firm from Bremen. They claim about 6,000 units have been shipped in the first three weeks, with the expected demand being at least twenty times larger in Germany alone.

According to the company spokesperson, Ms. Brumhilde Schuetz, whom I have recently met (thanks to my European connections), *Donnerwetter-ST* comes on one full-sized internal PC-board with a 16K cache, a 12 MHz Motorola 68000 processor, the familiar Yamaha sound chip and some proprietary chips she wouldn't talk about (there were, unfortunately, more such things). Some of those contain *DTOS*, a functional TOS clone (!) on ROMs.

Donnerwetter-ST supposedly uses both the on-board 68000 *and* the PC's 80x86 chip (as I understand, the latter performs some memory- and screen-management chores), and it outperforms the ST by a factor of two or better, depending on the program it runs. Yes, an AT-compatible or a 386 machine is required, with an XT version promised for early Spring. Hercules and EGA monitor standards are supported, with an extra socket allowing for use of Atari and Moniterm Viking units.

"This was the only way," Ms. Schuetz says, "to bring into the PC world not only *Calamus* and *DynaCAD*, but also *Dungeon Master* and many other deserving pieces of software." With the *Spectre* emulator (pronounced charmingly by Brumhilde as "Schpektyr"), the PC users will be able to run even Macintosh programs. To quote the spokesperson again, "We are letting those poor *[here my knowledge of German failed - JAW]* out of the dead-end alley of evolution they've got themselves into by buying the obsolete PC technology." I couldn't put it better, Brumhilde!

Ms. Schuetz was recently researching (undercover, so to say) the U.S. market in co-operation with some marketing organizations whose names I am not free to disclose. Asked whether she approached any U.S. distributors, she (very charmingly, again) stated that, at this stage, approaching computer writers makes much more sense and is much more fun (hear, hear!). Asked whether their U.S. marketing efforts will be aimed at the office or home environment, Ms. Schuetz said that we should, first of all, provide an honorable retreat for those who bought PCs for home use and now find it tough to admit they've done not the smartest thing but something exactly opposite; but we are open-minded. And open-minded she certainly is! In addition to being a stunning long-legged blonde, Ms. Schuetz happens to be *very* smart, a mean bridge player and a great cook; I believe our readers *deserve* this information.

We do not know how the *Donnerwetter-ST* will fare on the American market if it is brought here, but Ms. Schuetz herself would be a welcome addition to any environment, home, office or elsewhere. Do they have many more like that in Bremen?

-- JAW

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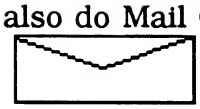

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STARTING BLOCK

by Richard Gunter

ARC Alternatives

Last month we looked at ARC 6.02 and its use. Since then, I've had more time to play with it. Nothing systematic, mind you-- just impressions. It seems to have a few implementation drawbacks that have led me to cut back a little on using it. Here are some things that I'd rather it did better:

While it **seems** a bit faster than the ARC 5.21 series, ARC 6.02 is not a speedburner. It seems to prefer the Crunch algorithm even when Squeeze yields better compression, and its Crunch method doesn't seem to be as good as other implementations. Lacking the Squash algorithm also handicaps it in the compression sweepstakes.

The strong points of ARC 6.02, I now feel, are in cross-machine compatibility and its ability to process folders.

Except for the folder processing options, the commands we discussed last month will also work with most other versions of ARC, so switching from one version to another should not cause any trouble.

There are two major alternatives to the ARC program series; one more or less compatible, and the other not.

DCOPY

DCOPY 3.2a is a menu-oriented file management program with archiving features. Its feel should be familiar to MS-DOS users; it comes up displaying a menu of commands (see figure 1), which are typed on a command line. When it needs a file or folder name, it opens a file selector box.

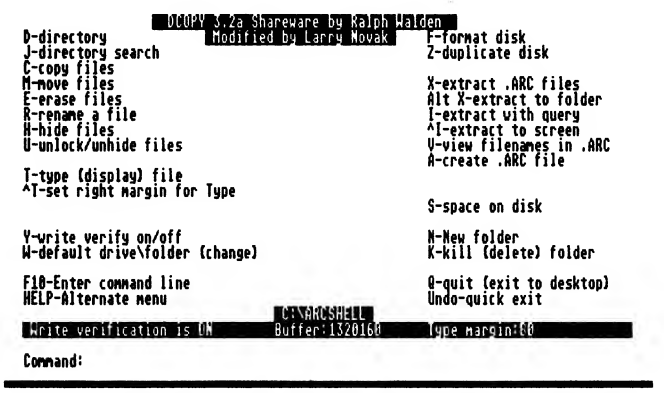
It's an easy program to learn, which is a good thing. My copy of Version 3.2a was not distributed with any basic documentation-- just a text file describing the changes. Presumably an earlier version might have a more complete manual.

DCOPY has a limited set of ARChiving commands. It cannot process an ARC file containing folders, and it won't use the Squash algorithm to add files to an archive. It will, however, unSquash for you.

I know several people who use DCOPY just for archiving. Two reasons. It is significantly faster than any other ARC-compatible program I've ever seen. Often so fast that I don't believe it's done. Second, its version of the Crunch algorithm is better than most in terms of space savings.

It's not to my taste as a file manager, but it's fast and reliable as an archiver. Its menu design eliminates the need for memorizing complicated commands.

Figure 1: DCOPY Options Screen



LHARC

LHARC 0.51b is a newcomer to the archiving gallery. You'll probably want it in your library, since LHARCed files have started showing up on the commercial services and some BBSs. LHARC is *not* compatible with ARC in any way, shape, or form. Recognize its output by the ".LZH" file extension. This program has one thing going for it. Data Compression.

LHARC uses only one algorithm, and it is a good one, yielding substantially smaller files than any ARC program on all files I've tried with it.

LHARC, however, is slow. Slower than most ARC programs, and a lot slower than DCOPY.

Its commands are similar to those of the ARC programs, so if you've mastered ARC.TTP, that shouldn't be a problem. It also allows you to add comments on the files you store, which can be a convenience.

Recently, I've noticed an extract-only program for LHARC files on one of the commercial services, but I haven't tried it yet. It claims fast extraction, but won't help with building an LZH file.

I've taken to using LHARC for files that I'm putting into deep storage and don't expect to use again. Sure wish it were just a **little** faster, though.

File Size

The programs we've been discussing vary widely in the amount of space savings you'll realize, and the savings also depend heavily on the sort of files you're archiving.

Savings for text files, including word processor documents, and some pictures can be impressive. Graphic formats that are already compressed, less so.

GIF images, for instance, are already heavily compressed and won't get much smaller. Digitized sound files and some game save files won't usually compress much either.

There's some overhead involved in creating an archive file; this extra space is used for directory information and for encode/decode tables used by some algorithms. The archiver program you're using may not report either sort of overhead space.

The following table illustrates these points. These results are based on a single file--a *Chaos Strikes Back* saved game. The table shows the size of the archive file ("External"), size reported by DCOPY or LHARC ("Internal"), and the net savings. Net savings was computed based on the total size of the archive and the size of the original (42,815 bytes).

CSB Saved Game - 42,815 Bytes

Program	External Size	Internal Size	Net Saving
ARC 5.21C	39485	34493	8%
ARC 6.02	37325	37294	13%
DCOPY	36681	36650	14%
LHARC 0.51b	30720	30044	28%

ARC 5.21c "squeezed" the data, and ate up quite a bit of space due to overhead. ARC 6.02 and DCOPY "crunched" the data, and DCOPY did a bit better, though neither required much overhead. DCOPY did the job faster than the others, but LHARC was the clear winner in terms of overall space savings.

ARC Shell

Basically, a "shell" is an interface program that stands between you, dear user, and an application. It's there to give you a more convenient means of communicating with the application.

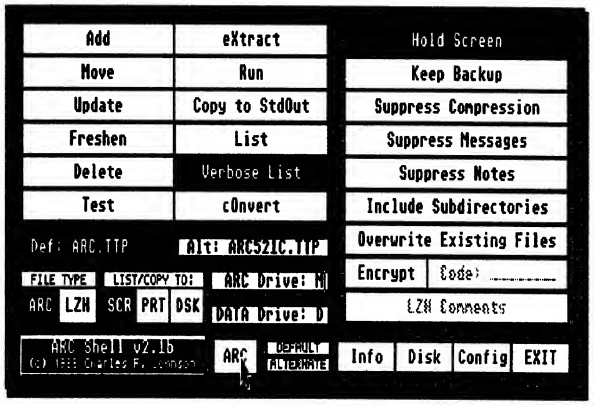
One type is a command line interpreter (CLI), which allows you to type commands without being bothered by dialog boxes.

Another type allows you to use the mouse to communicate with programs like ARC that expect a command. The one I use is ARC Shell 2.1b, a shareware program, distributed under Charles Johnson's Little Green Footballs label.

This mouse-driven program allows you to do just about everything you'll need to do with ARC and LHARC. No need to remember commands--the program generates the commands and passes them to the archiver automatically. ARC Shell's main screen is shown above.

To use it, just click on the appropriate buttons. In figure 2, I've already clicked on "Verbose Listing," selected my default drive, and am ready to click on ARC to run a listing of an ARC file's contents. When I

Figure 3: ARC Shell Option Screen



do, I'll get a file selector box from which I'll pick the ARC file I want to see.

That's basically it, although there are a lot of other options. ARC Shell supports a primary and an alternate ARC program as well as LHARC and its alternate. You can set up defaults for each program option, and invoke fancy features of ARC 6.02 and LHARC on the right side of the screen. The Configuration button lets you tell ARC Shell where your programs are and where the ARC program should put its work files. You don't actually have to place the archiver programs and ARC Shell in the same folder.

Installing ARC Shell is no sweat. Just copy the program to the folder you want it in, run it, tell it where the archivers are, and click on the Save Configuration button. As usual, Charles' documentation is complete and useful. ARC Shell is a good choice if you don't like typing commands in dialog boxes.

One word of caution, though. You'll need enough on-line space for the shell and any of the archivers you're using it with, plus your data and ARC file. Without at least two floppy drives or a hard drive or a lot of RAM, you may not be able to use it effectively.

Pebbles from the Bit Stream

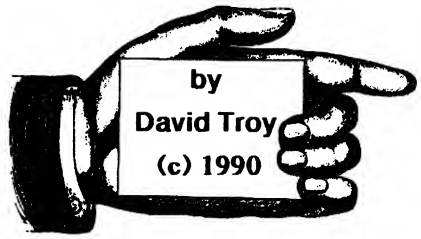
FTL Games has another winner in *Chaos Strikes Back*, the long-awaited sequel to *Dungeon Master*. You don't have to have DM in order to play it, but FTL clearly expects you to be familiar with DM. You've gotta know magic spells just for openers.

The monsters are tough; I counted 12 dragons--one of which is extra bad, and there's one area where they regenerate.

This game has random elements that'll drive you nuts and some really fiendish puzzles. There's a utility disk with a help feature (what does that tell you)? I think this one stands up to replay even better than DM.

If you've played DM, by all means buy CSB; if you haven't, buy both.

Good work, guys!



Searching, Neochrome, and Installing Laser C

Did You Check the Mail, Honey?

Here we are again for another friendly installment of Myths and Mysteries! While I don't particularly mind rambling on about different randomly chosen topics each month, and you'll find that I will anyway, a major purpose of this column is to provide a point of interaction for you, the readers of *Current Notes*. So, as I have been saying, what we need is for you to send your questions, your hottest fantasies, your deepest secrets, and your most embarrassing mistakes to us here so that we can discuss them, in our forum.

Still Searching...

In one of the letters I received last month, Mr. Tom Murname posed the following question: Is there a program for the ST which will search multiple files for occurrences of a string, and combine the paragraphs in which that string appears into a single file?

As far as I was able to find (searching the libraries on GEnie and CompuServe), there is no program for the ST which will do this. There are a couple of implementations of the Unix command GREP (see Dave Small's column here about a year back for colorful comments on Unix--which I wholeheartedly echo) that will search file(s) for an occurrence of a string, and print the lines that the string is found on--but it has no implementation for finding paragraphs. C source code is provided for these, and you could modify, without too much trouble, that source code to work for paragraphs. There are a couple of other PD programs which will search files and disks for occurrences of specified strings, but again, they make no provision for grabbing paragraphs. Mr. Murname cited the program *Lotus Magellan* for the IBM which will do this, but I know of no analog on the ST. If anyone knows of a program which will do this, please feel free to write, fax, or call me.

Oh, the RIGHT button!

Another question came from Ms. Kate Flook who wanted to know how to load a program from *Neo-Chrome.*

Well, that's pretty simple, turns out. All you have to do is use the RIGHT mouse button to click on the DISK ICON. That will produce an item selector box and you can use that to pick a file to load.

The Manual Strikes Back

In an unrelated story that I think some of you might find helpful, I recently purchased and installed Megamax *Laser C* on my ST's hard drive. This is something I thought would be very simple, but as it turned out, I had to make two phone calls to Megamax before I could get it going. Let me tell you what happened.

First of all, the manual is a little misleading. It has instructions for installation on different sorts of floppy setups, and also for a hard disk. So, I figured I'd follow the instructions for hard disk installation--silly of me, right? It suggested I create a folder on the root of the hard disk partition called MEGAMAX and then copy everything off the SYSTEM and WORK disks in the MEGAMAX folders on those disks into the new MEGAMAX hard disk folder. Ok. I can do that. So I did. Then it said to copy the remaining stuff into the MEGAMAX folder, or wherever I want, and set it up. It also said I shouldn't place the MEGAMAX folder anywhere but on the root of the hard drive. So, I put it in the root. Cool.

Well, I then tried to run LASER.PRG, the program that invokes the Laser C shell--a program that houses the compiler, linker, and the debugger, if you have it. It loads all of these programs into memory so that you don't have to wait for them to load each time you want to use them. The problem I had was that I couldn't get the shell to think that the should-be memory-resident files lived on the hard disk. It kept on thinking they lived on floppy drive A.

I had to convince it they live on the hard disk. For that, I had to go to the "Tools Locate" menu option, and tell it the Linker, Compiler, and Make live on the hard drive. I had a bit of problem doing that since I had to first REMOVE the tools that were installed (on drive A:) and then reinstall them as being on my hard disk. The tricky thing about that is those programs are not shown with their proper drive address. The menu option just says "CCOM," "LD," and "MAKE" are installed, without any regard to the fact that they are expected to be found on your faithful floppy. So, I had to remove those three programs, and reinstall them.

The display looks identical, the difference being that, this time around, the program *knows* that they live on the hard drive. Subtle. Very subtle.

After I did all this, I set up, in the "Environment Variables" section, the rest of the program's paths the way I wanted them and then chose "Save Environment." (Catchy *GREENPEACE* menu option, eh?) Now, every time I go to load LASER.PRG (or any of the programs it invokes) it searches the proper paths.

While this little story sounds like a case of me being dumb and not being able to set the paths right (which it mostly is), there is an underlying reason for my dumbness: the Laser C Manual. As I said, the manual is a little misleading. The installation instructions for the hard drive do not tell you where to copy the files. The "Tools Locate" option is discussed later in the manual, but there is no reference in the installation section suggesting that you should refer to this option. Plus, the manual says that the MEGAMAX folder may not be placed anywhere but in the root directory. When I confronted Megamax with this statement, they said, "Gee, I don't know why it would say that. You ought to be able to put it anywhere." If anyone should know *why* the manual would say that it should be them, since they wrote it and all. Hmph.

A customer of mine came to me a couple of weeks ago, with similar bafflement caused by the *Laser C* manual's hard disk installation instructions. I wasn't able to help him until I sat down and tried it myself, so that's why I thought others might run up against the same problems. While I don't intend to review *Laser C* here, nor throw *too many* rocks at Megamax, you folks should know there is this pinprick hole in its overall design. And let me say that just from a cursory glance and light usage, so far, Megamax *Laser C* looks to be fast and quite well thought out. Good work, in general.

Off We Go to Londontowne...

Well, kids, I must finish this up now so I can continue a mad orange-juice-and-toast frenzied late-night session of cancerous productivity--basically, I have to be able to leave by 4:45 AM. I'm going to London with my lovely family! I will try to garner as much ST information as I can. Next month you will see a full report! Joe Waters and I figured that they might not have Lynx's over there yet, so I'll bring mine along. The customs people really ought to love the backpack with a CD player, Portfolio, and Lynx in it. Rechargeable NiCd batteries must look neet-o-keen on an x-ray monitor.

Upping the Ante...

Oh yes, about that question thing. What we have decided to do, to make it worth your while to send me questions, is this: we'll send you a coupon good for a Current Notes PD disk of your choice, if we answer your question here in Myths and Mysteries.

In our modern-day world of electronic communications, there are a variety of different ways you can reach me.

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Let me remind you, as well, of the Current Notes ONLINE section on GENIE. It is in the ST Roundtable Bulletin Board, under Category 15. We have our own special Myths and Mysteries topic on there, too--topic 5. Feel free to drop your questions in there, too. Oh well, folks, see y'all next time with UK ST info and some answers to all those questions you're going to send me! Happy STing!

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How to Improve Your ST Productivity

Confessions of a Neodesk/Revolver/UIS Junkie

By Greg Csullog

The Pre-Neodesk Preamble

Over the last four years, I have seen a lot of changes in software for the Atari ST. When I bought my 520ST in June 1985, the only piece of software available was TOS on disk. I remember demonstrating my 520ST to try and get others interested in buying one so we could have a users' group and provide each other with support. The sales pitch must have worked because over forty people bought 520STs in time for Christmas 1985 (not bad in a town of 4,000 people and for a computer that had only a handful of good software packages by December 1985).

Some good software packages have appeared over the intervening years. Timeworks *Desktop Publisher* has been a workhorse for me for a couple of years. *Word Writer* used to be my word processor of choice but *1ST Word Plus* is now my day-to-day word processor (I know that there are a lot of *WordPerfect* enthusiasts out there and, yes, *WordPerfect* Atari has the menu/mouse support for the ST but having endured *WordPerfect* on an XT for years, I have not been able to bring myself to buy and use *WordPerfect* Atari, yet). *LDW* is a great *Lotus 123* compatible spreadsheet and I would not be without it. *dbMAN* is my database of choice because *I have to have dBASE* compatibility. *dbMAN* has a crude font end, cryptic help and overall lacks the elegance of *dBASE*; however, it provides the compatibility I need.

Occasionally, I try my hand at programming but I do not enjoy it. I find it tedious to write computer code because I am not very good at it. However, I have purchased *OSS Pascal* (I was writing a PD telecommunications package until Simon Poole released UNITERM), *Fast BASIC* (I really like this language), and *HiSoft BASIC*. I have dabbled in C but I find it the most tedious language to work in (I told you I wasn't good at programming).

I also bought *pc ditto*, then *pc ditto II*. I also bought *Magic Sac*, then *Spectre 128* and then *Spectre GCR*. While I have not been able to reap the benefits of *pc ditto II*, I can tell you quite honestly that *Spectre GCR* is worth every penny.

Many times, I have been asked why I would want to use PC and Mac emulators for the ST. I got comments to the effect, "If you want to run Mac software, why didn't you get a Mac?" Well, at the time I moved from a 520ST to a 1040ST, an AT clone with a 20 megabyte hard drive or a Mac with a 20 meg drive cost over $3,000 (Canadian dollars). The ST with a 20 meg drive was priced at about $2,000.

However, it was not the price of hardware that was the determining factor; it was software. Atari ST software was, on average, one third to one half the price of PC or Mac software. I could not afford Aldus *Pagemaker*, *WordPerfect*, *Lotus* or *dBASE* for personal use and I refused to pirate them (virtually every PC user that I know has acquired a PC for home use because "I can get a copies of my software from work.") *I buy my software and I could afford packages like Timeworks DTP, LDW, etc.* The PC and Mac software that I do use was purchased by my employer; I certainly did not want to buy *dBASE IV* or *Excel* for home use!

The programs and hardware add-ons that I have discussed so far have allowed me to become highly productive in a business/research work environment. However, being the zealot for productivity that I am, I wanted more, more, more. I am always on the lookout for tools that will speed me through my work with the least effort. Three of the most important tools that I have acquired to zip me through day-to-day work are *Neodesk*, *Revolver* and the *Universal Item Selector* (UIS).

Neodesk

Here is a simple rule that Atari ST users should live by:

IF YOU HAVE AN ATARI ST WITH A HARD DISK, USE NEODESK. Neodesk is a replacement for the built in Atari desktop and it has extended the desktop's capabilities enormously. I cannot think of any other software package that I appreciate more than *Neodesk* (except, perhaps the UIS).

Just look at figure 1, a snapshot of my ST's screen. On the right side of the figure, you can see that program icons have been placed directly on the desktop. Now, when I want to run my favorite programs, I no longer have to open up the folder where the program resides.

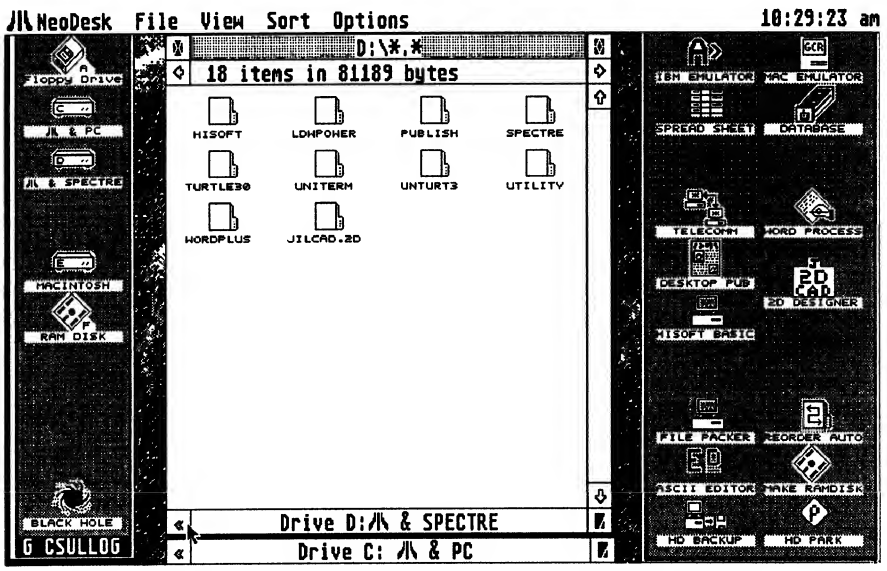
For example, suppose I am running *Uniterm* to talk to a VAX computer and I want to exit and run *1ST Word Plus*. With the standard Atari desktop, I would have had to:

1) stop *Uniterm*,
2) close the *Uniterm* folder,
3) open the *1ST Word Plus* folder, and
4) double click on the *1ST Word* program icon.

Using Neodesk, all I have to do is:

1) stop *Uniterm*, and
2) double click on my 'Word Process' icon on the *Neodesk* desktop.

Figure 1: Greg's Neodesk Desktop



Some of you reading this may say "Big deal, so you saved a couple of steps." However, if you consider the number of times I have to switch applications in a day and add up all those extra steps that I no longer have to carry out, then slowly, but surely, I save a good 15 minutes to half an hour each week not fumbling through folders looking for applications. At overheated labor rates that can easily be over $50 an hour, important cost savings can be realized by an employer with productivity increases like this.

Do you see the little < symbols in the drive windows in figure 1? *Neodesk* is worth having just to get access to those little beauties. Ever have a situation where you touched a window and it covered up another one that you wanted to access later? Remember that you had to either move or close the window that was on top to get at the one on the bottom? If you have *Neodesk,* the problem disappears (at least at the desktop level). All the user has to do is touch the < symbol on the top window and the window gets pushed to the bottom. I maximize the area available for icons on my desktop by arranging my drive windows as shown in figure 1. All I do to 'top' the window on the bottom is touch the < symbol on the current top window. When I want to copy files from window-to-window, e.g. from D: to C:, I open up another window that, by default, occupies the area normally used by icons on the desktop and that brings up another point.

You can see that the drive windows on *Neodesk* have vertical scrolling capability (see the up and down arrows) but no horizontal scrolling. Unlike the standard Atari desktop, *Neodesk* rearranges window icons to fit within the current window. If there are too many icons to fit, they are scrolled off in the vertical direction only. It only takes a little experience with *Neodesk* to realize that this makes much more sense than the original horizontal and vertical scrolling of the standard desktop's windows.

Neodesk has tons of extra features like:

- ✓ **Hot-keys:** See the 2D CAD icon in figure 1. At the top of the icon is the letter 'J' indicating that this program can be started by holding the shift key and typing the letter J twice.
- ✓ **Multiple file renaming**: To name a group of files, select the group with roping or clicking and then hold the Control key and Shift key and click the left mouse button. This will bring up a dialog box to rename the first file selected. Once renamed, the dialog box will reappear for each remaining file to be renamed.
- ✓ **Command line interpreter:** For the diehard CLI enthusiast, a path to a CLI can be set from the *Neodesk* desktop. When the user types Control-B, the CLI is invoked. Now, all you DOS and UNIX advocates can quickly switch to CLI utilities like GULAM.
- ✓ **Copy or move:** Unlike the standard ST desktop, if you drag an icon for a file copy operation, *Neodesk* can copy or move the file. Anyone who has had to copy files into a folder and then delete the original files will appreciate the fact that the move option of *Neodesk* does this in a single step.

I could go on and on but I had better get to *Revolver* and the *UIS*. But before I do, one final comment. I said that *Neodesk* is a must for hard disk users. While it can be used from floppy, its power is realized on an ST with a hard disk.

Revolver

Revolver is a switcher utility and then some. The best way to explain *Revolver* is by example.

When I started my Mega 2 to write this article (I forgot to tell you that I moved from a 1040ST to a Mega 2), I started it with *Revolver* in my AUTO folder. Previously, I had set up *Revolver* to divide my Mega's memory into two 1 megabyte partitions and right now, I have *Neodesk* at the desktop in partition one and I am writing in *1ST Word Plus* in partition two. While writing about *Neodesk*, I kept switching between the two partitions to use *Neodesk* to decide which feature I wanted to write about. Switching between partitions is painless; all I do is hold the Control-Left Shift-Alternate keys and zoom, I'm in the next partition.

Remember my discussion about the productivity increase with Neodesk (and not having to root through folders)? Well, read on!

In my full time day job, I use a 1040ST and *Revolver* does not do well on a 1040ST (1 megabyte of RAM is not enough). So, I have ordered a FrankenSTein RAM upgrade kit to boost my 1040ST's memory to 4 megabytes. I am going to buy another copy of *Revolver* and install it on my new multi-meg monster. I will then divide the memory into four 1-megabyte partitions. I plan to run the *Neodesk* desktop in partition one, *Uniterm* in two, *LDW* in three and *dbMAN* in four. Then, when I want to switch applications, all I have to do is jump between partitions. Talk about a productivity increase, wow!

However, task switching is not *Revolver's* strength--rollouts are! What is a rollout? Take the example of the four partitions from above. When I head home after a day's work, all that I would have to do to preserve what I was doing is rollout each partition to hard disk. Rolling out makes an *exact image* of a memory partition, squeezes it to between 30 and 40 percent of its original size and writes it to disk. When I start my computer after a shutdown, all I have to do is roll in each of the partitions to return me to what I was doing last.

When a partition is rolled in, everything that was in it, including desk accessories, memory resident programs and the current application are loaded in from hard disk in about 6 seconds! If *LDW* was running in a partition when it was rolled out, then *LDW* will be rolled in with the sheet that was being worked on at the exact spot when the rollout was performed. So, instead of saving my worksheet when I quit for the day, I will save the whole memory partition.

With each of my four 1-megabyte partitions, I can load in different desk accessories and different memory resident programs. For example, in partition one I can load in GDOS (or G+Plus) and six of my favorite desk accessories. In partition two, I can omit GDOS and load six different desk accessories. With four 1-megabyte partitions, I can have the equivalent of four 1040STs running different programs, different accessories and different memory resident programs. I can even run color in one partition and monochrome in another. I can reboot one partition and not affect the other partitions (Programmers, you can crash your ST in one partition and not lose what you have loaded into another!) The best part of all, you can do all this from a single keyboard on one computer. Hey PC, Mac and Amiga owners, only on an ST, eh! Pity.

If you are using an ST in the office, in the lab, or in any other business, you should boost the memory to two or four megabytes, install *Revolver* and increase your productivity dramatically. You will pay for the cost of the memory and *Revolver* in a short time. Every day you delay means you will get poorer performance from your ST than is possible.

Revolver has only one drawback. *pc ditto* and *Spectre GCR* will not run with the memory partitioned. To turn your ST into a PC or a Mac, you will have to do a COLD restart and deactivate *Revolver*. Pressing the reset button (warm restart) will not work since *Revolver* protects the ST's memory from resets. Deactivation is accomplished by holding down the [Left Shift] and [Alternate] keys during the startup cycle (if you boot from hard disk, hold these keys after the hard disk driver installation message appears). Cold starts can be carried out by holding the [Control]-[Alternate]-[Undo] keys if you are using *Neodesk* with the *Neodesk* control panel accessory in memory.

I do not know whether or not it is possible but it would be great if you could run *pc ditto* and *Spectre* in *Revolver* partitions. Imagine switching between PC, Mac and ST modes by holding down a couple of keys on the keyboard!

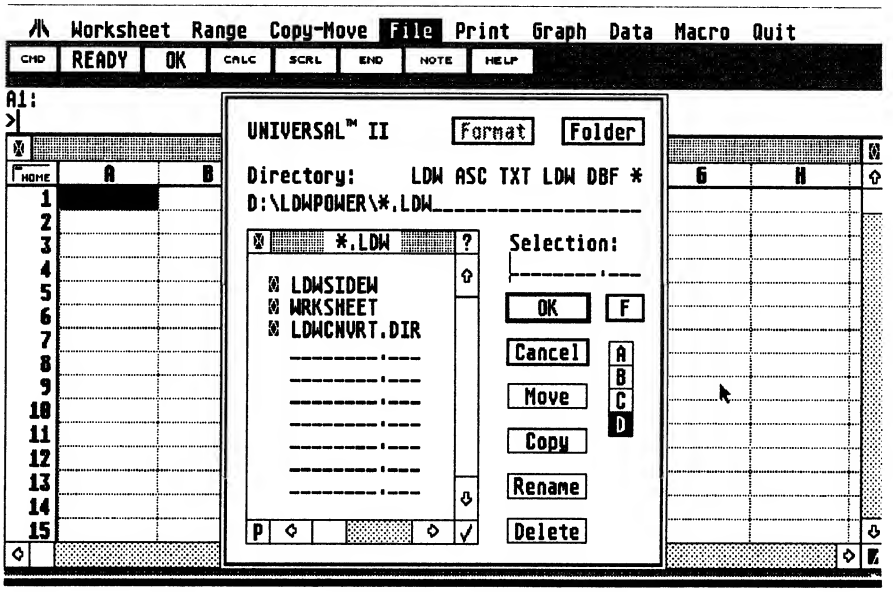
The UIS

Anyone who uses an Atari ST knows about the Atari file selector (FSEL) box. While the FSEL provides a common way of performing disk input/output operations, there are serious limitations to this utility. For example, if you want to switch drives you will have to edit the pathway specified by the FSEL. This requirement is a real pain for hard disk users.

Here's another simple rule for ST users:

USE A REPLACEMENT FILE SELECTOR BOX.

Figure 2: Universal Item Selector Selection Screen



My favorite FSEL replacement is the *UIS*. Figure 2 shows the *UIS* called from within *LDW*. [Figure 2 shows *UIS II*. A new version, *UIS III*, is now available. –JW] If you put the *UIS* in your AUTO folder, it will be called automatically by any Atari program that normally calls the default FSEL (just about every Atari program).

The *UIS* dynamically determines the drives that you have (in the example shown in figure 2 these are drives A, B, C and D) and it posts a list of the drives. To switch drives, just click on one of the drive letters. If you add a drive, such as a RAM disk as drive F, the *UIS* will add the new drive to its list.

The *UIS* also posts a list of default file extensions (e.g. .DOC, .ASC, .TXT, etc.). The first one in the list is passed to the *UIS* from the calling application, such as the .LDW extension as shown in figure 2. From *LDW*, if I want to import a *Lotus 123* sheet, I would click on the wildcard extension (*) to display all files in the directory and then I would choose a .WK1 file from the updated file list. With the default Atari FSEL, I would have had to edit the file path to reveal the .WK1 files.

See the letter P in the bottom left corner of the *UIS*? If you click on this letter, the current directory will be printed. If you drag an ASCII file's name from the file list to this letter, the file will print. You can MOVE, COPY, RENAME or DELETE a file or a group of files by dragging their names from the file list to one of the function names listed in the *UIS*.

Did you ever try to delete a READ ONLY file. From the standard desktop, you had to:

1) click on the file's icon,
2) access the SHOW INFORMATION item from the FILE menu,
3) change the file attribute to READ and WRITE, and
4) delete the file by dragging its icon to the trash can.

If you wanted to delete more than one READ ONLY file, you were in for quite a time. With the *UIS*, if you try to delete a READ ONLY file you will get a prompt that asks if you want to proceed. If you say OK, zap, the file is gone. Now, I use the READ ONLY feature on files because I know it's easy to trash the files using the UIS.

The *UIS* also lets you create and delete folders from within any application that uses the FSEL. The latest version of Atari *WordPerfect* gives you this option instead of forcing you to use the stupid *WordPerfect* file selector (yes, it is stupid).

Wrap Up

I have spent a lot of time tweaking my ST to get the most out of it. I have installed utilities like QSTAUTO and FATSPEED to improve system performance and I guess I could look at a 16 MHz 68000. However, productivity is not judged just by how fast a computer will run a single application. Instead, productivity is heavily dependent on software integration, the ability to move information between applications and the ability to move between applications quickly and effortlessly. If you get yourself multiple megs of memory, *Revolver*, *Neodesk*, and the *UIS*, you cannot help but improve your productivity on your Atari ST.

You will hear a lot of PC enthusiasts bragging about the 33 MHz '386 machines that are out and the multitasking environments they support. Big deal, so they can run a bunch of unrelated codes with totally unrelated interfaces and no easy way to port information between them. Load up your multimeg ST with *Revolver*, *Neodesk*, the *UIS* and Atari's nicely integrated software (the stuff ported from PCs does not count if it has not been GEMified) and you will run circles around the fast '386 box with your 8 MHz Atari ST.

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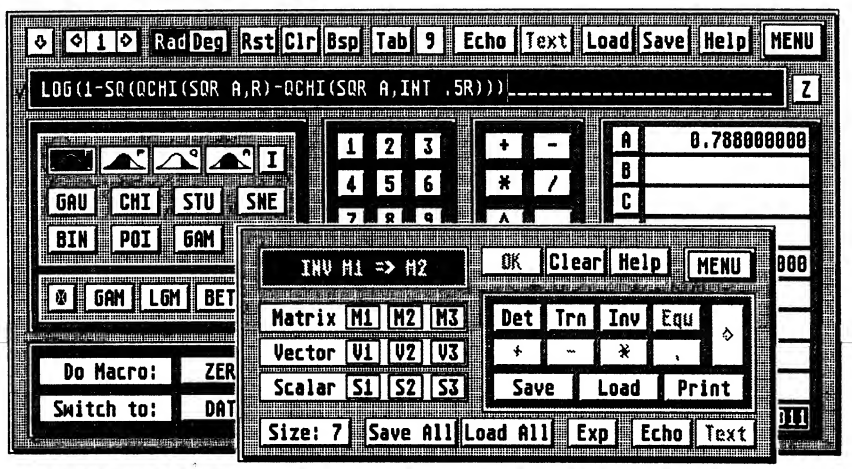

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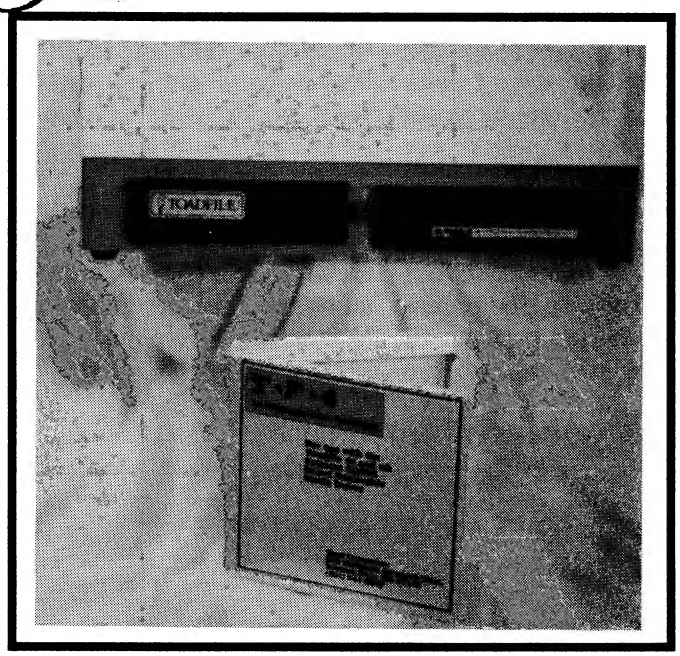

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SoundOff!

A Sound Digitizer for the Atari ST

by H. Earl Hill

Introduction

MIDI is a system for controlling a synthesizer via a computer. The converse of MIDI is sound sampling, which is the conversion of sounds into a digital form where they can be manipulated and played. To do this, you use a sound sampling device. Also, you need some software to complete the job.

SoundOff! (tm), a new product from Diverse Data Products, the MFD drive company, allows you to capture any analog signal from an audio source, and digitally reproduce the sound on your ST/Mega. There are features that allow you to manipulate the recorded sound, plus store the sounds to disk for later retrieval and playback (see figure 1). *SoundOff!* is the creation of Joe Andrews, an electronic hobbyist.

The *SoundOff!* system is a combination hardware and software package. The hardware is a 3/4 x 2 x 3 1/4 inch cartridge that plugs into the cartridge port. The cartridge converts the audio signal fed to the cartridge into a digital representation that the computer can understand. The software accesses the cartridge and furnishes the capturing, editing, playing and saving capabilities.

Installation

The *SoundOff!* cartridge originally came with only one input. However, Danny Purisch of Diverse Data advises that they are now also shipping a new improved Plus version that provides audio output as well. The program itself runs in either high or medium resolution. The very complete main screen displays the prime functions of *SoundOff!*. These include the GEM menus, buttons for the functions, and a window showing a graphic representation of the sound which is stored in memory after loading it through the cartridge.

For those who are familiar with digitizers, use of the program will require little effort. However, for those new to sound digitizing, you will be exposed to a new experience--the techniques of using a sound digitizer. The manual is an excellent guide for this learning process, and leads you step-by-step through all the features in a clear, logical fashion.

Before use, the digitizer must be calibrated to the particular input source being used. No further adjustments are required unless you change the sound source. Complete instructions are given in the manual for the calibration, which is done in conjunction with the *SoundOff!* program software. A special subscreen called "Scope" is used for this calibration.

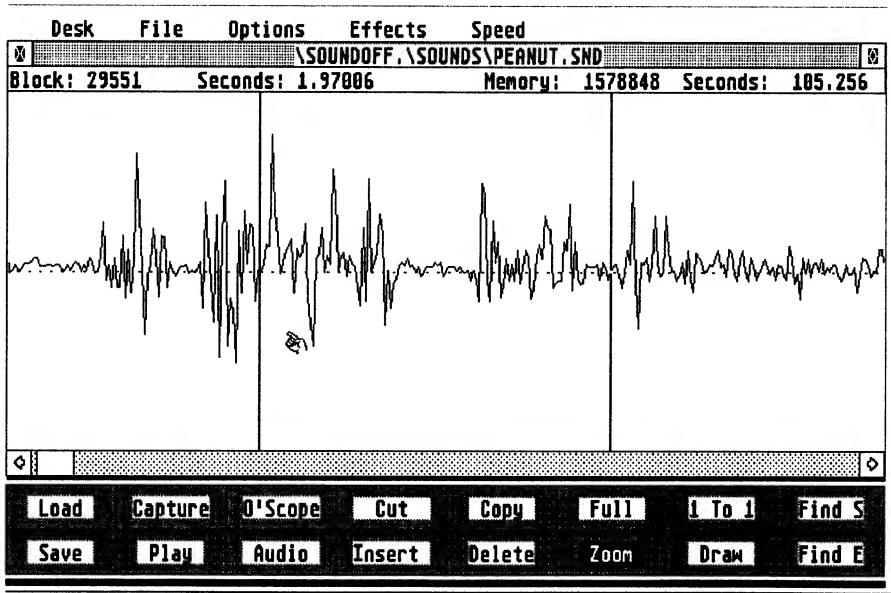
Working with SoundOff!

Capturing a sound, the key aspect of *SoundOff!*, is an operation done by setting sample rate and sample time. This is carried out with consideration for memory requirements, since digitized sounds require a lot of memory. The waveform of a captured sound is displayed in the window. All or a portion of it may be heard immediately, and besides this, the capture can be used to check on the quality of the recording, suggesting any minor recalibration that might be necessary.

A further option is the "trigger" function. This is an extremely useful feature which allows selective delay of the capture. Of even more utility, the trigger may be set to a selected threshold volume level.

A number of additional options are provided for sound playback. The entire sound memory, the marked block, or the cut buffer may be chosen. Sounds may also be repeated. If you have the *SoundOff!*

Figure 1: Main Display Screen for *SoundOff!*

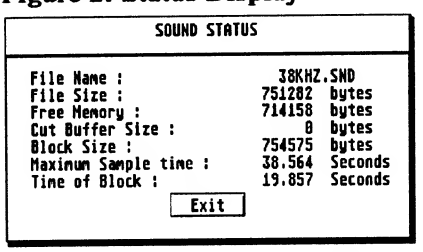


cartridge with the 'audio out' jack, you may output via a stereo; otherwise, it's through the monitor speaker.

A full complement of the most commonly used functions in *SoundOff!* have been given keyboard equivalents to speed editing functions. Additionally, the function keys have been assigned special attributes. These keys are used to set 'cursor tags' which mark or restore the location of the block markers. The tags are sound dependent. In other words, they stay where you put them in relation to the sound in memory, a very good way to do it.

One other important function in version 2.0 of *SoundOff!* is the 'Status' display (figure 2). Status shows a dialog box giving information about the sound and memory allocations. With this display you can get information about the sound file name, length, block length and time, free memory, cut buffer size, etc.

Figure 2: Status Display



The function of the new 'Audio' button in the control panel at the bottom of the screen was added after printing of the manual.

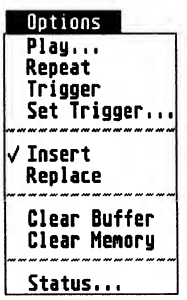
By clicking this button, you can listen to the input. The 'Audio' mode works in all speeds except 38Khz. Using this function will let you hear the differences in sample rates. *SoundOff!* has also been updated to load Amiga IFF files, as well as Mac format files. Now you can hear and modify sounds created on the Amiga and Mac computers. Since the sample rates of these files are different from *SoundOff!*, a default speed of 20Khz is set when one of these file types is loaded.

To further help the user, the disk contains 'Uniplay!', a program by Tom Hayslett which does such things as letting you play your file sounds at different speeds, backwards, etc. A selection of five sound files is furnished to illustrate glass breaking, a 'transport' sound, and several voices, including my favorite alien!

File Handling

Numerous options are furnished for saving and loading a sound file. These are as *SoundOff!* or DigiSound (.SND) format, or raw data format (.SPL). Similar to a word processor, sound files can be loaded into memory as 'Insert' or 'Replace.' Minor incompatibility with DigiSound files can be easily adjusted.

Editing



It's difficult to say which is the most powerful function of *SoundOff!*, the Editing or Special Effects. The Editor certainly offers a number of very powerful and essential functions. Editing behaves similarl to a word processor, which makes it intuitively easy to learn. You can delete sections of a sound file, move sections around, insert or replace a sound block, clear the buffer, or erase the entire sound memory, all very versatile options. Block markers allow you to position an area of memory, and see this position on the screen display.

Special Effects

The new version 2 of *SoundOff!* has a number of special effects functions. These are too detailed to cover in this review, but they encompass all sorts of fancy things to really enhance your sound files. Details are clearly explained in the manual, so that any experience level can easily learn their use. Here you have such sophisticated effects as Noise, Silence, Mirror, Overlay (a sound mixing function), Stretch, Squeeze, Amplify/Soften and Raise/Lower. Your abilities are limited in a very real sense by only your imagination and skill.

The Drawing Functions

ZOOM. Point and click options similar to a drawing program are furnished for several ways to view sound memory. The first of these, 'Full,' lets you view the entire sound memory, e.g., the area used to set record areas. The 'Zoom' button lets you expand the selected block region to full window, where sound memory can be manipulated with 'markers.' You can even view a single byte of sound! The '1 to 1' button expands the sound to where one byte of sound occupies only one pixel in the window.

DRAW. As in a program such as Degas, you can work on the screen display to erase a sound trace and draw a new waveform on the screen. In other words, you can edit your sound byte by byte. This is certainly one of the most interesting functions of *SoundOff!*.

Using Files in a Language

Inputting sounds is fine, but *SoundOff!* also offers more in that the files can be patched *into* GFA BASIC and Megamax C programs. Several files on the disk show examples of how to do this. The sound files can be called via the procedure code, and, thus, played through the monitor or other output. Sound files are stored in the same format as is used in ST-Replay files. GFA BASIC uses the Void call; and allows factors such as Trigger and Speed as variables.

Documentation

SoundOff!'s documentation is a 5 x 6 3/4 inch, 38 page well-done manual. The documentation is quite understandable, and progresses logically from 'getting star-

ted' to the more complex functions. Each section is well delineated. The index has been omitted, but I feel it is probably not really necessary in a manual this size, considering the excellent Table of Contents. The figures are not numbered, but they are easy to follow due to their placement within the text. Any revision of the manual should consider a few more details in the text; going to a numerical section layout; numbering the figures; plus possibly adding an index.

Mods and Improvements

Any improvements should be considered in view of the author's intent to supply a digitizer that can perform as well as others at a price to rival most software programs. Very fancy improvements would offset the "Performance Without the Price" goal. But some things could possibly be done. One of these would be to add routines for STOS Basic, which is becoming increasingly popular for game programming. Another would be to add sound compression to reduce memory use. Some other nice, but probably expensive items would be Filtering, Echo, Reverb, In/Out Fade, and Real Time Mixing.

One needed hardware improvement would be a redesign so that it would be impossible to plug the cartridge in upside down. Be careful when you insert it, as installing it upside down will damage the digitizer and could possibly damage the computer! Also, as with all cartridges, turn off the computer before inserting or removing them.

Summary

SoundOff! is a combination hardware/software sound digitizer for real world sources. Capture rates are from 5KHz to over 31KHz. A one meg ST can capture over 146 seconds of sound; but beware, sound files use a lot of memory! The software is not copy protected and can run from any partition on a hard drive. It offers full GEM and/or keyboard support.

Special features include effects such as Amplify, Stretch, and Overlay. Word processor type point and click editing allows features like Cut, Insert, Replace, etc. The sound files are compatible with other ST sound digitizers, and can be incorporated into C or GFA BASIC.

SoundOff! is an easy-to-use, quality product offering real value for the money. Its long list of features offers just about every convenience possible to help introduce the field of digitized sound for the ST. If you are thinking about getting into digitized sound, take a look at *SoundOff!* It could be your best entree.

Software version reviewed: 2.0.

[SoundOff! ($74.95) with added 'audio out' jack ($79.95), Diverse Data Products, Inc., P.O. Box 695324, Miami, FL.]

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A Tail of Two Mouses

Sporting Lines and a Long Tail

by Sam VanWyck

It seems that I am always on the lookout for ways to enhance the value and utility of my computer equipment. Loosely translated, that boils down to "I'm a sucker for every new gadget that comes along." Thus, when I saw an advertisement for an improved mouse from DATEL Computers of Las Vegas, I knew I had to have one.

Enter Genius Mouse

About a week after I placed the order, UPS showed up with my new playmate. She came packed in a custom molded plastic box, cushioned in die-cut foam and sporting the logo Genius Mouse. A quick look showed that her size was very slightly smaller than her Atari equivalent while her tail was far longer (72" compared with 38"). While this would usually be considered an advantage, in my small workspace at home it required some innovative rearranging before she could sit and move comfortably. On the positive side, the cord is more flexible than the Atari's and thus is less likely to nudge an unattended mouse out of position.

Almost Disappears

My first impression of Genius Mouse was similar to that of several others who tried her. "Oops! Where'd it go?" While it is slightly higher at the rear, under the fingers it is only half as tall as the Atari and lacks its hand-filling sensation. It also has a sort of sporty look, somewhat on the lines of a Lamborghini compared with Atari's blunt-nosed bulldozer appearance.

Both units have their buttons in the same relative position and are equally easy to reach. Likewise, tactile and audible feedback are about the same. Genius' action is clean and a trifle lighter. The only real difference is that the effect is somewhat like a double click. You feel a "bump" when the slack is taken up on the actuator and another "bump" when contact is actually made; not a critical matter. The double-click command is no easier, nor harder, than with Atari's mouse. It still requires that you take care not to move the body of the instrument while tapping the left button quickly enough to register the proper command.

The Difference That Counts

Perhaps the largest difference between the two mice is the speed of cursor movement. Measurements of screen response versus mouse movement suggest the movement ratio between the two is approximately 2:3 with the DATEL unit providing the greatest on-screen travel for a given amount of hand motion. This will be an advantage to those with limited exercise area for the mouse. I noticed that I needed far less of the pick-up-and-put-down action than with the Atari version.

Easy to Master

Of course, this might also have the negative consequence of making exact control difficult but, with one exception, this was not the case. Those testing the unit appeared to have no difficulty in mastering the placement of a word processor cursor or laser cannon sighting ring. In fact, when rapid cross screen movement was needed, Genius Mouse was clearly the better performer.

Overshooting

The one exception was when using the desktop. Quite often, when reaching for a file or icon near the top of the screen, the cursor would overshoot and "puncture" the dropdown menu area necessitating an extra movement and click to restore order. This is controllable, at least with *WordPerfect*, by "locking" the menu bar against unwanted intrusion.

Do You Need It?

Is there a Genius Mouse in *your* future? I think that would depend very strongly on just how dissatisfied you are now with your Atari controller. If the most noticeable advantage of the DATEL product is speed, one could always pick up one of the various PD programs offering mouse acceleration in one form or another. In fact, using a software speed regulator, it is possible to vary the response according to your need of the moment. If all you need is a longer cord, extensions are available. Together, both would cost far less than DATEL's $50.00 price. If you need a replacement unit, I would certainly recommend that you try the Genius Mouse before making a decision. It really is a well designed, useful tool.

[Genius Mouse, DATEL Computers, 3430 East Tropicana, #67, Las Vegas NV 89121]

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Be sure to tell us in advance if you are changing your address. *Current Notes* is mailed out second-class. This means that *it will not be forwarded* to your new address. The post office will tear off the cover, place your new address sticker on the cover (if you've given them one) and send it back to us, with a bill for 35 cents. The post office then throws away your magazine.

DS Drives Can Use Back of SS Disk

Or, Who Says You Can't Flip a Disk Over?

by Roger Tolbert

I kept waiting for someone else to come up with this, but I never heard or read anything about it. So I did it myself. It is very simple really. Remember in the old 8-bit days, when you could flip the disk over? Well, this modification will 'act' like you flipped the disk over. Some people are confused when I first mention doing this. Since we have double-sided drives (DS), why even bother? But there is a good reason, read on.

This information pertains only to double-sided drives and to those who have wondered about the wasted, unused, back side of a single-sided formatted disk. You will be able to boot from either side and keep each side separate from the other. Combine two single-sided disks on one disk!

Since this is a hardware modification, users should know how to handle a soldering iron, and count pins on IC's. Users should also know how to disassemble the ST. *Do not attempt this if you are not familiar with any of the above.* 'Nuff said?

I release all of this information into the public domain for everyone to do with as they see fit. Enjoy! (I take no responsibility for the misuse or faulty installation of this modification. I did it to my 1040 and it works great! I use it all the time!) [P.S. *Current Notes* takes no responsibility either. Perform any hardware modifications at your own risk. -JW]

Description of Mod

Now let's get into it and explain what this is all about. Take a single-sided formatted disk; only one side, of course, has been formatted/written to. Always the bottom side, the side that has the wheel on it. But the back side is not used. Half a disk lies wasted!

The first thing you are probably thinking is: If you have a double-sided drive, why don't you re-format a disk double-sided and recopy the files from the single-sided disk over to it? What could be simpler? But wait just a minute! How about *protected* disks, which, in almost all cases, are single-sided? Now, you are *not* going to be moving those files over to a double-sided disk! If you are able to move them, they won't work. Remember, it was a protected disk. And don't forget boot-type single-sided disks which have no files, no directory. Data disks which are used by some popular games don't have directories either and are usually single-sided. We begin to see that, in all cases, the double-sided drive owner sees the back sides of disks that must remain in single-sided format as wasted, especially with the price of 3 1/2" disks!

This modification allows you to format, write and read all functions just like a single-sided drive, but on the back side. You can even boot the system from the back side! Note, however, that no one else's ST will be able to read the data, programs, etc. that are on the back side unless they also have this modification!! Sure, they could copy the disk, but they can't run the programs on the back! You could use the back side as a hiding place for files! And, with a simple flip of the switch, your drive will behave normally as it did before the mod! The easiest way to understand this mod is to 'think' that you have flipped the disk over! But all you did was flip a switch!

Parts List:

- ✓ One switch--Radio Shack No. 275-625 or equivalent.
- ✓ Three pieces of small wire, 6-10 inches.
- ✓ Soldering iron, solder.
- ✓ The illustration in this article as a guide.
- ✓ A few tools.

Do not confuse this hardware mod with a software program that is in the public domain and, at first glance, seems to do the same thing. The software version does not, cannot, allow boot-up of the back side, especially protected programs. It won't even allow you to run the programs on the back side until you move them to a normal side. When you turn your computer off, the software version is gone, even if it was able to survive reset, for booting, its code would surely affect some protected software and especially those that need a completely clear memory to boot! By contrast, this modification is totally in hardware!

The Modification

It is always wise to **read all of this** before doing anything! Refer to the picture file. I tried to keep it as simple as I could. If you have done this type of work before and know where the components in your ST are located, just looking at the picture should be enough.

Anyway, here is what you do. Disassemble your ST. For those ST's with built in drives, the chip we are after is usually under the drive. Remove the drive. Locate the sound chip (a 40-pin chip). The sound chip is identified by the part no. on the chip: CO25983 and probably: YM-2149 or AY-3-8910. On my 1040, it is under the drive and is U19.

Important Note:

There are several different revision 1040 boards out there, and the newest have everything re-arranged in different locations and with different 'U' numbers! So yours may or may not be U19. Go by the part no. to be sure! The newest 1040 board I had a chance to examine had been wired for a Blitter socket and could use either 256K chips or the 1-meg type! Everything on the board of this 1040 was in a completely different location than in my 1040!! Now, back to the mod.

Locate Pin 21 on the sound chip. Cut the trace leading to Pin 21 in a convenient place. We want to disconnect that trace from Pin 21. Look closely with a magnifying glass or with a good eye to verify that the trace no longer connects to Pin 21. Solder a wire to Pin 21 on the chip. Solder the other end to one side of your switch. Take a knife or a razor blade and carefully clean off the trace and solder one end of a wire to the trace. Take the other end and solder to the *center* of the switch. Now all we need is a ground. Take a wire and solder it to the remaining end of the switch. The other end is soldered to ground. A good ground is right by the printer and modem connectors where the "ears" are soldered to the PC board. Be sure you have connected to ground and not something else. Mount the switch where you see fit. I mounted mine on the back above the drive connector.

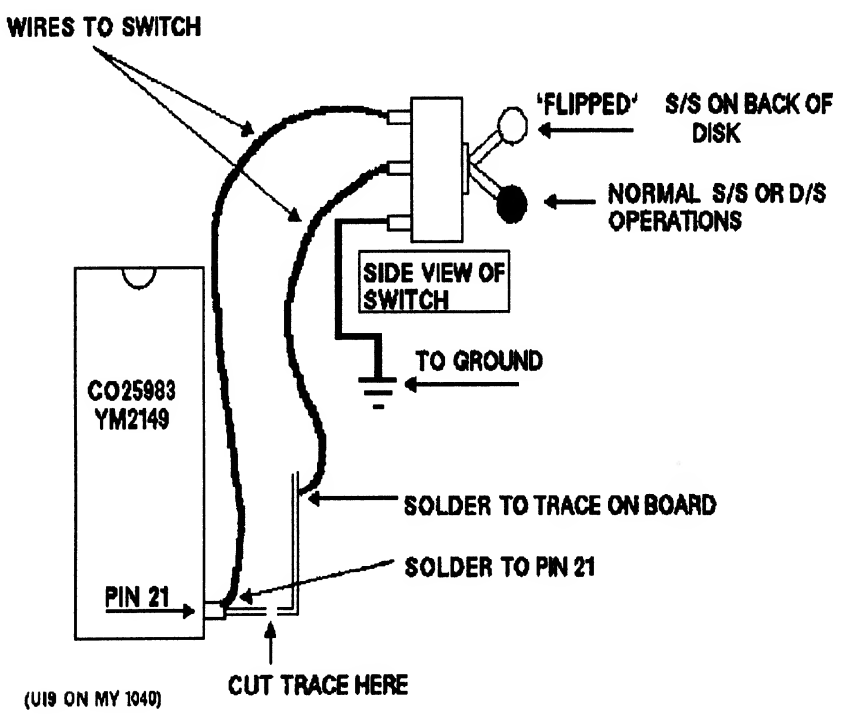
(If your sound chip is in a socket, which is probably very rare, you won't have to cut any traces, just remove the sound chip and bend leg 21 so it doesn't go down into the socket and solder your wires accordingly as described above.) Now let's test it.

Testing

One position of the switch should be called 'normal' which is exactly what it means. The drive behaves as if you had not done this mod. The other position is the Flip position for the back side use. To test and figure out which way is which on your switch, take a single-sided disk that has some files on it, one you have used before you did this mod, and boot up the system. Read the directory. If you see your directory, the switch is in the normal position.

If you don't see a directory, just 0 bytes like an empty disk, or if you get the CANCEL/RETRY box, you have the switch in the Flipped position. Flip the switch, hit [ESC], the directory appears. You might have to close and re-open the window to get the drive to re-read the disk. Why? Because you did not actually remove the disk and re-insert another one. Once you have identified the switch positions, mark them or remember them. I mounted mine so that *down* is NORMAL and *up* is FLIPPED. Like a light switch down-off, up-on. Keep it simple.

Now put the switch in NORMAL position. Format a disk single-sided. After it is finished formatting, flip your switch and format again single-sided. When it is through, save DESKTOP.INF to it. Read the directory. There is DESKTOP.INF. Flip your switch to NORMAL. Read the directory now. Where is DESKTOP.INF? It's on the back, not on the normal single side! Flip the switch again and re-read the disk and there it is! Remember that sometimes you will have to close and open the drive window again. Simply pressing [ESC] will not re-read the disk after moving your switch, because you did not actually change disks. The ST knows when you have actually removed/inserted a disk.



Cautions: Common Sense Before Moving Switch

You may say yea, that's easy! But be careful! It is easy to have the switch in the FLIPPED position and not find a directory on any of your old single-sided disks or your double-sided disks. It won't hurt a thing when trying to read them, but if you format a double-sided disk to single-sided with the switch in the flipped position.... Well, I think you follow. Double-sided activities cease operating in FLIPPED position. After all, you are imitating a

(Continued on Page 50)

Bright, Light, and Flat Too!

Or, All That You Wanted to Know About Liquid Crystals But Were Afraid to Ask

by Earl Hill

The latest addition to the ST family is the STacy, the new laptop computer. STacy comes with one megabyte of RAM, TOS 1.4, one 3.5 inch 720Kb floppy drive, an internal clock chip, and optionally, an internal mini 20 meg hard drive. Initial configuration will be much like a 1040ST (1 meg, 1 DS/DD drive).

The STacy is a truly portable computer system, weighing only 15 pounds (including the built-in battery pack), with full MIDI capabilities. The mouse has been replaced by a built-in trackball. The STacy will run everything a normal ST equipped with MEGA TOS and monochrome monitor will run. It is understood that the final production blue-on-white screen will feature a 640 x 400 pixel (just like the SM124 monochrome monitor) back-lit LCD twist display. Supposedly, the STacy screen display will be driven by a custom chip called Shadow.

The rationale for this entry by Atari into this market is obvious. Laptops presently make up a $1.2 billion dollar industry. They are expected to grow to $6 billion by 1992. In 1988, laptops made up 7% of the total PC market. In three years, they are forecast to comprise 16% of industry sales.

Liquid Crystals

What are we dealing with when we talk about this new LCD display of the STacy? Liquid crystals are concerned with the chemistry of materials, a far cry from the electronics of the cathode ray tube which is the basis of the SM124 mono monitor as we know it.

To talk about liquid crystals, we must talk mainly chemistry, plus a little engineering and electronics. In 1888 Friedreich Reinitzer, an Austrian botanist prepared a chemical called cholesteryl benzoate, and found that it changed from a turbid liquid (a liquid crystal) to a clear liquid upon heating. Upon cooling, the process was reversed. This change, simply stated, if done on a small enough scale, forms the basis of an LCD screen display.

Gradually chemists found that many organic compounds have structural properties intermediate between those of a true crystal and those of a true liquid as they pass from the solid to the liquid state. This is why they are called "liquid crystals," and the intermediate phase (or phases) is described as liquid crystalline.

Although liquid crystals exhibit certain aspects of both the solid and the liquid states, they also possess properties that are not found in either liquids or solids. For example, they can be "ordered" by magnetic or electrical fields. Some display unique optical properties. Some also change color as a result of the sensitivity of their structure to temperature. A common example of this is the digital temperature measuring strips that you've seen. These unique properties form the basis for the numerous practical applications of liquid crystals.

Liquid Crystal Displays

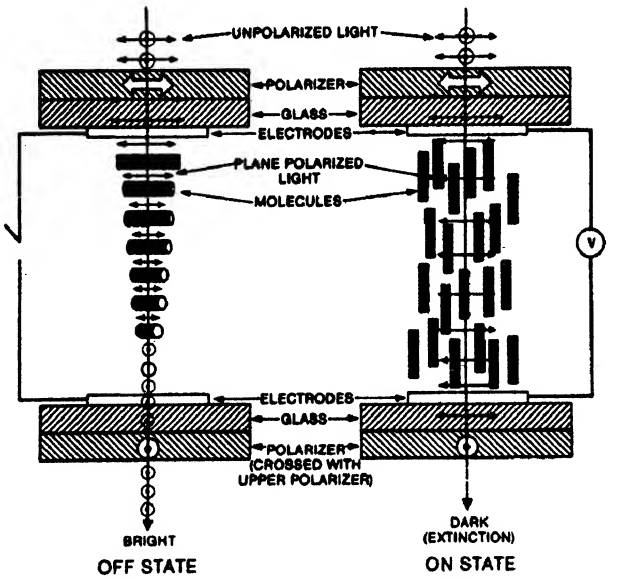
The widest commercial use of liquid crystals is in display devices. They consume very little power, and are versatile, reliable, and easy to read under ambient lighting conditions. They have the further advantage of allowing the construction of a flat panel, which is essential for space-constricted computers such as the STacy laptop.

Liquid crystals are ordered fluids. They form ordered structures with various packing arrangements of the molecules. Commercial applications rely on changes in molecular orientation of the molecules by external forces, such as heat and/or electricity. One example of this is a localized increase in temperature on a liquid crystal layer, which can change the wavelengths that are absorbed and those that are observed. On a micro-scale, this effect can be used to produce contrasting areas of light and dark, such as a display of letters or numbers, as is seen in the common watch displays.

Typically, a small amount of nematic liquid crystal is placed in a thin, flat, laminar layer. The layers of the cell walls, which are coated with a transparent conductive film, are treated carefully to control the direction in which the long liquid crystal molecules are oriented. Application of an electric field to a certain region of the cell then disturbs the orientation of that region in one of a number of different ways, thereby changing its optical appearance.

As an example, the figure describes the manipulation of the orientational order of the molecules in the twisted-nematic liquid crystal display mode that is used commercially. In a twisted-nematic LCD (black alphanumerics on a white or clear background) the

The Configuration of the Twisted-nematic Display Device



electrically sensitive liquid crystal mixture is sandwiched between two plates of glass. Both of these glass plates are coated with a polarizer and lined with transparent electrodes. The upper polarizer is at right angles to the lower one, and behind the bottom glass plate is a mirror.

In the "off" state, the liquid-crystal molecules are parallel to the glass plates. The molecules at the top surface are oriented at right angles to those at the bottom plate. Between the two plates the molecules twist through a quarter helix. The plane of the polarized light passing from the top plate is rotated through 90 degrees by the molecules and passes through the bottom plate. The light is then reflected by the mirror back out of the device along the same path.

In the "on" state, under the effect of the applied voltage, the molecules "stand up" and become parallel to the field, destroying the helical arrangement. The polarized light traversing these upright molecules is absorbed by the bottom polarizer, which is at right angles to the upper polarizer, creating the appearance of black letters, for example. When the electrical field is turned off, the molecules relax to their natural positions.

Super-Twist Crystals

LCD screens are ideal for laptop computers because they are flat, consume little power, and are more readable than gas plasma displays. Demands for improved visibility, brightness and contrast (clarity) of LCD screens has led to continual improvement. The progression has been from bare displays, to displays with backlighting, to the newer back-lit supertwist LCD's.

Backlighting for the LCD displays is conventionally an electroluminescent panel. The contrast ratios are about 12 to 1. The higher the contrast ratio, the better the gray scale, which adds more depth to the display. Most LCD screens display a slight bluish tint, which is caused by differences in rotation of the blue component of the light by the liquid-crystal polarizing material. Advances in the engineering and the polarization system have been able to minimize this effect in a lot of the newer flat-panel displays.

In these newer displays, the LCD material is referred to as a super-rotator. It will rotate light through several thousand degrees per millimeter. Contrast this with quartz, which can rotate light through only about 20 degrees per millimeter. This high degree of rotation allows an extremely thin layer of LCD material to be used. In actuality, the net rotational effect is 90 degrees. When power is applied to the LCD material, the normally twisted crystals untwist. This allows the polarized light to pass through unchanged. If the light was vertically polarized when it went in, it will stay that way when it emerges. This, of course, is the way the panel displays areas of black and white contrast.

Other Applications

Because the selective wavelengths of liquid crystals are sensitive to nearly everything – temperature, electric fields, magnetic fields, among other things – liquid crystals have found use in many areas other than as display devices to replace cathode ray tubes. Many of these other uses were developed before the LCD's, although some newer ones, such as optical shutters, continue to be patented. All of the applications rely on changes in molecular orientation of the liquid crystal.

Some of these other uses for liquid crystals are in the common temperature indicating strips. A less common use is in dye-containing liquid crystal layers, which are used to produce colored displays. Liquid crystals are used in locating defects in printed circuit boards (thermal mapping), another application in the computer field. Liquid crystals can be used to detect several types of radiation, such as infrared, microwave, ultraviolet, and ultrasonic. An interesting application of liquid crystals is in large panel displays, where the entire panel can be made opaque or transparent; frequently for varying, controlled lengths of time. Another recent use is in a new eye-protective, liquid-crystal lens for welding helmets. Here, the lens can change from clear to opaque in 20,000th of a second upon exposure to the intense welding light.

In the medical field, liquid crystals are used as a diagnostic tool to detect carcinoma of the breast. They are also used to study abnormal venous patterns, locate the placenta of a fetus, and diagnose pulmonary disease. Liquid crystals are also considered to be factors in at least three diseases. Hardening of the arteries is a result of deposition of liquid crystals of cholesterol esters on artery walls. Here, interestingly enough, liquid crystals that cause the disease are used

as diagnostic tools for the same disease. Cells involved in sickle cell anemia have a liquid crystal structure.

One of the most useful commercial aspects of liquid crystals is in the making of liquid crystal polymers. Materials made from such polymers are exceptionally strong. One example of this is Du Pont's Kevlar(tm) aramid polymer, which has been used to make everything from super-strong tarpaulins to the strong, light fiber used in the construction of human-powered airplanes such as the "Gossamer Condor."

Liquid crystal polymers have also been proposed as aids in oil recovery, where they may double the amount of oil recovered.

Liquid crystals are already second only to the cathode ray tube as a display medium. Even more uses lie in the near future for them as flat-panel display devices. Some of these new display uses will include telephones, automobiles, and television sets. Applications in portable devices such as computers can be expected to continually increase. Let's hope that the STacy is a big contributor to this growth!

♦ ♦ ♦ ♦ ♦ ♦ ♦ ♦

DS Drives/SS Disks (continued from page 47)

a single-sided drtive flipped over. Don't be flipping the switch on a double-sided disk. Leave the switch in the **NORMAL** position for double-sided use. Unless, of course, you are going to format it and reuse it as per this mod.

Both drives A and B are flipped when you move that switch to the **FLIPPED** position. Remember that, especially when formatting a disk. When copying a whole disk to combine single-sided disks together, use one drive. Alternatively, you can use a program which allows you to select drives A and B or turn off drive B, so that you are in a one-drive condition to copy whole disks. The reason for this is that the program will write to the second drive directly after reading the first one, and you are trying to combine two disks together on one. You won't have time to flip the switch before it begins writing! With one-drive copying, when it asks for the Destination disk, just flip the switch and hit return. These warnings are really all simple ones if you think about it. Just think before you flip that switch! Now with this modification you'll be saving disk space that was wasted before, a whole side, space you couldn't touch! But now it is yours!!

This mod was done on a 1040 STF Revision D board and works great!

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Blood Money

Worth Its Weight in Blood

Review by Bradford Mar

Pushing "The Envelope"

If you, too, are sick of seeing truly excellent arcade games being rehashed and butchered for your Atari, then your remedy is Psygnosis' *Blood Money*. This is what a computer shoot-em-up should be.

Blood Money was programmed by David Jones (author of Menace, which received rave reviews upon its release). It was originally written with the Amiga in mind, but the translation to the ST is excellent. This way Mr. Jones was able to design the game to push your computer to its limits.

But enough on the making of *Blood Money*, and on to the product itself. As per usual with Psygnosis games, the box cover displays the beautiful art work from the poster included with the game. The instruction manual is carried out in a very clever way, in the form of an advertisement. The advertisement is for the *Blood Money* Sweepstake Safari which challenges all comers to survive the four, alien-infested worlds and come away rich men. Your character is Spondulix, who, with 200 credits to his name, decides to take a chance at the profits to be gained from wholesale, alien destruction.

Four Planets to Plunder

To embark upon your safari, you must pay the entrance fee for the planet of your choice. With only 200 credits at the beginning, you must first select from one of the two easiest planets. After plundering your first planet, you should have enough money to enter the two more difficult planets.

Each of the four planets consists of a different terrain and requires its own form of transportation. For 100 credits, the mechanical world offers a host of robotic nasties for your high-tech helicopter to blast into scrap metal. The underwater level, at 200 credits, gives you and your mini-sub the chance to shoot at a variety of graceful and exotic alien sea life. For sheer, arcade pleasure the ice world can't be beat at 300 credits. With your jet pack strapped on, you can explore the results of a world torn by the ice age. Hardest of all is the living world for 400 credits. This world comes straight from the movie *The Fantastic Voyage*, pitting you and your rocket ship against wave after wave of enemies that can only be described as "organic." Once a world is completed you return to the planet menu. There you will find on the image of the world you just conquered a big, and very satisfying, "PLUNDERED" stamp.

The gameplay is solid and smooth. At various points in the game, you will be able to enter stores to buy an assortment of weapons or extra lives. Spend wisely, for when you lose a life, all of the weapons you had go with it. Of course, at the end of each planet is the complimentary guardian alien that is harder to kill and worth much more money.

Difficult, Not Impossible

At first, the game may seem impossible. Once you get used to the flow of things and learn the patterns of the aliens, you will be able to progress with reasonable speed. As you reach the more difficult levels, brushing against the scenery will become more of a factor in the snuffing out of your lives. You can either play the game with background music or sound effects. I turn the sound low because the game requires my full concentration.

The graphics are the strong point of this game. The animation, which utilizes the sprites to their fullest, is outstanding. Some of the aliens in *Blood Money* require a full 18 frames of animation! My personal favorites are the angelic jellyfish in the underwater world and the photo-quality ice boulders on the ice world.

Hints

To speed you on your way let me suggest the following:

- ✓ Don't buy extra speed. It will make the ship harder to control, thereby making it easier to crash.
- ✓ Keep an eye on how many more hits you can take before buying equipment. It may be better to kill yourself and get a fresh life with which to buy weapons.
- ✓ Don't be too greedy when trying to catch the coins; that could mean your downfall.
- ✓ If an equipment store is too hard to reach, skip it and wait for the next store.
- ✓ The first things to buy are the guns that fire down and the range increaser. Grab 'em early.

Blood Money is a long game, but it is conquerable (yes, there is a reward animation at the end) and addictively fun. I was and still am thoroughly impressed with this outstanding value. *Blood Money* is definitely arcade-quality material, and it shows what can be done-when you set out to make the ultimate computer game rather than the ultimate coin-op conversion. This game is a must for any "plunderer's" arcade collection.

Art & Film Director

So You Want to be in Pictures

Review by Brian Miller

Have you ever fancied yourself a famous artist, animator, or film director? Well even if you are no Picasso, Don Bluth, Steven Spielberg, or Jack Kennedy, you can ply what talent you do have, or merely amuse yourself and family. All you need is your ST, a color monitor, and a good deal opatience.

Art & Film Director by EPYX offers a complete package of programs which will let you construct your own animated films, complete with sound. Don't worry if you lack the confidence to draw your own characters, props and backgrounds from scratch. *Art & Film Director* provides a rich assortment of graphics which you can use to begin making films right away.

Art & Film Director only works in low resolution. While the manual recommends one megabyte of memory, the programs will work with 512K ram. The four single sided diskettes are not copy protected, so you can easily make back-up copies and run the programs from the floppy drive. With the proper equipment, you can make video tapes of your films.

Hard disk users can copy all four disks to a single directory to have easy access to the entire package of programs and options. *Art & Film Director* will not work if desk accessories and utilities such as GDOS are installed. You must deactivate these first before using *Art & Film Director.*

Art Director and Film Director incorporate many sophisticated features. The advanced user will not easily feel limited, but by the same token, the novice may experience a good bit of frustration while learning to put these features to their best advantage. Fortunately, the manual which accompanies the program includes a tutorial section for the two primary programs, which should ease the learning process. The manual also serves as a complete reference guide to explain each feature.

The manual takes almost 150 pages to comprehensively detail these programs. A much shorter review can only proffer a brief profile of *Art & Film Director.* With that in mind, I will sketch out each program separately.

Art Director

Art Director is a complete and sophisticated painting program. At first glance, it is reminiscent of Neochrome. It presents a black canvas with an accompanying toolbox. By right clicking the mouse, a gem menu bar is presented as well, which includes other options.

The toolbox holds those tools you will need to use most often. From it you can select color and a variety of predefined shapes including: lines, circles and rectangles. You can also choose a variety of pencil shapes for free hand drawing, or cut an area of the painting to be used as a brush shape.

You can move the tool box around on the canvas, to put it where you need it. You can also remove it altogether by clicking the close box. Pressing the function key F10 will return the toolbox to the screen.

Additional options available through the toolbox can be activated by clicking the right mouse button over the option itself. In this way, for example, you can change the predefined shape from a circle to an oval. You can also adjust the color of the palette of the 16 chosen colors, from a total of 512 possible.

While you can get a lot of mileage from the toolbox alone, many other advanced features can be accessed through the Art Director Menu Bar. You need it to save your work and load or print a picture. If you find you don't have enough room to save your masterpiece, you can also choose the format disk option to prepare a blank data disk.

A wealth of special effects can be selected through the Menu Bar options. You can reshape or stretch a portion of your picture. You can distort its appearance, or rotate a portion of the picture around an axis.

Art & Film Director lets you add depth and the illusion of 3 dimensions to your painting with the bend, bulge, and perspective options. With these special effects, you can wrap an object around an imaginary sphere cylinder, or alter the perspective of a scene.

The Menu Bar also contains an assortment of advanced Tools you can choose. You can select a Spray Can to spray your picture with a variety of patterns. You can use the Smear option to mix up pixels of color. You can Scrape away a color to reveal the back page of a picture. You can also create shadows with the Shade option, or run colors together with the Melt option.

Art Director includes a Special menu option which presents other assorted selections. In my extremely humble opinion, *Art & Film Director* would be a worthy addition to your software library for the Art Director program alone.

The Art Director program provides all you would need to create art work and scenes for animation, or for other needs as well. You could use the program to create clip art for desktop publishing needs, just as

easily. In fact, Art Director provides some of the advanced tools and effects not found in other painting programs.

There is a price to pay for having this power at your disposal. The Art Director program requires a good deal of effort to learn. It took me several sittings before I began to feel comfortable with many of its more commonly needed features. I have yet to master some of its more promising options.

Film Director

The other major program included with *Art & Film Director* is the Film Director program. This program uses cel animation to generate animated films from the pictures and scenes you make with Art Director. You can also develop animations from the graphics included with the package, or from pictures, or clip art converted from other sources.

Like *Art Director*, Film Director provides a tutorial which you can use to learn the basics of film animation. The tutorial is an extremely helpful way to be introduced to the series of steps required to create an animation. If you have not used an animation program before, you might work through the lesson several times. This will help you to become better acquainted with the series of steps needed to make a film.

An animation viewed on the screen is actually made up of several separate elements. When combined, these elements unite to create the film. Film Director provides a toolbox and menu bar for each of these elements. While the tools are, indeed, powerful, it takes a good while to develop a level of comfort and skill in using the program.

Film Director employs patterns, polygons, groups, actors, stages, and frames to develop the animation. Unlike cel animation done by hand, Film Director uses the power of the computer to create the in between steps, called tweening, to develop an animation sequence. Film Director has a Path option which will let you define the path you want your actor to follow in the animation. With the aid of an accompanying program, included with the *Art & Film Director* you can add sound to your animations.

I found Film Director a challenge to use. As with Art Director, I am still struggling to get a firm handle on each phase of the program. However, the potential offered by Film Director has kept me from becoming discouraged.

Art & Film Director Utilities

Art & Film Director includes a number of utility programs which deserve at least a brief word or two.

ARTCONV.PRG allows you to convert pictures from Neochrome or Degas format to the .ART files used by the program. The program gives you control over input and output of files. You can not only convert Degas into an .ART file, but you can use the program to achieve the opposite result. You can convert from .ART to Degas .PI1, for use in other programs.

ARTSHOW.PRG lets you present a slide show of your Art Director Pictures.

FILMSHOW.PRG lets you view animations separately with this stand alone program. The other choice would be to display films from within the Film Director Program.

MUSICSEL.PRG allows you to add sound to the animations you create. *Art & Film Director* includes a total of 27 sounds to choose from. You can combine 9 to create a single file to be added to your animation.

Th-Th-Th-Thats All Folks!!!

I feel I have barely scratched the surface in telling you about EPYX's *Art & Film Director*. While I have given only a glimmer of its attributes, I hope I was able to convey some idea of the power and potential of *Art & Film Director*. If so, perhaps your appetite has been whetted sufficiently for you to begin creating your own ST Tunes.

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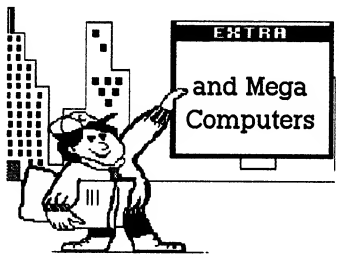
Shutter the windows! **Clear the Sidewalks!**

PaperBoy is here!

Review by Joe Sapienza



Read All About It!

The distant sound of breaking glass is heard. You poke your head out from the blanket and peer at the clock. "6:50 a.m.?!?! It CAN'T be morning already!" Closing your eyes and covering your head with the covers, you turn over and PRAY it's a dream. (Yawn...yawn) Ahhhhh..... CRASH!! "What the..." you exclaim as you hear a neighbor yell out a few choice words. "Oh, it IS morning," you groan, as you piece together the sequence of events. The *PaperBoy* has arrived!

Yes, *PaperBoy*, the arcade game, has arrived to our favorite computer, having been ported over from the video arcade coin-op. Your job as paper boy is obvious - deliver the morning newspaper to the subscribers of your paper route. Properly delivered papers means happy customers, which means paying customers, which means a happy boss, which means a continued job, which means a continued paycheck, which means a happy paper boy! (Say that ten times fast!) Improperly delivered papers mean unhappy customers, which means... well... you get the picture. (Remember in life, whether it's good or bad, *it* always flows downhill!) Let's check out our newspaper and see what we've got.

Classified Section

WANTED: PaperBoy. Must have own bicycle, and be proficient in maneuvering this type of vehicle through neighborhood streets. Must have skill in throwing newspapers. Time is important; no stopping of your bicycle is allowed while on route. This may make hitting your subcriber's paper receptacle potentially difficult. Must not be color-blind, as all of your subcriber's houses are yellow, and you must be able to see the difference. Must be willing to accept harder work challenges as experience increases. Must have "flexible" ethics. (More on this later)

Business Section

PaperBoy arrives at your doorstep on a single sided diskette, and will work with the 520, 1040, and Mega series of ST computers. A joystick is required to control your alter ego. The sparse but adequate documentation states that the joystick should be in port 0, but I've not had a problem with leaving my mouse in this port and using port 1, the "standard" joystick port. A color monitor is required. While booting the game, a colorful title screen gives credit where credit is due. When this process is completed, a "Front" page is presented for you to select the difficulty of the game. This is made by joystick movement --left for EASY STREET, middle for MIDDLE ROAD, and right for HARD WAY. Choosing a "route" will determine the number of troubles you will encounter, as well as set the scoring tables, 1X, 2X, and 3X respectively. You will start out the week's work on Monday and complete (hopefully) a 20-house route. This success will take you to the the practice track! As long as you have any of your six lives left, you will continue your daily work--Tuesday, then Wednesday, etc., till you've lost all of your lives.

The Score Board

There are several ways to score points in this game. Delivering a paper to a subscriber's house by accurately tossing it into their paperbox earns you 250 points. Collect the stacks of papers on the sidewalk for 50 points each. Here is where the unethical behavior mentioned earlier comes into play. The documentation states that your boss "pays well" (i.e. bonus points) for such actions as breaking the windows of non-subscribers, destroying grave stones, and blasting garbage cans and birdbaths. Finally, at the end of your route, additional points can be accrued on the practice track.

Self-Improvement Section

The practice track is the place where you can earn extra points by tossing papers at bulls-eyes, maneuvering around obstacles, and jumping ramps. Each squarely hit bulls-eye brings you 250 extra points. Use of the ramps will replenish your supply of papers to throw. This romp through the track is timed, so speed is important for maximum point achievement. It is important to note that you do not have to complete the practice track to continue on to the next day.

The Daily Section

After your trials and tribulations through the practice track, you are given your Daily Report, which is a

screen that shows your paper route and the subscribers you successfully delivered papers to. As long as a percentage of your customers have been serviced, you will continue on to the next day, with a gain of additional subscribers. The Daily Report also shows all the houses on the route and whether they are subscribers or not (colored yellow and gray, respectively).

The Funnies Section

Graphics in the game, while not outstanding, are not among the worst I've seen. While the houses are basic in design and color (as noted above), some of your obstacles and assailants are quite colorful and detailed. Obstacles are static objects strewn along your route that will take one of your lives if contact is made. Some of these include overturned wheelbarrows, open manhole covers, fences, street grates, and children sitting on the sidewalk. Assailants move in various directions along your path (most notably in *your* way) and are quite varied--among them are overweight joggers, radio controlled dune buggies, kids on hot wheels, punks on unicycles, unleashed poodles, rolling lawn mowers, free wheeling auto tires, and carefree convertibles on the main drags. Some of the assailants can be dealt with by clobbering them with a well aimed toss of one of your papers (I especially enjoy clunking the jogger!). Most of the static objects are too low to toss a paper at, so do your best to avoid them. There's one more item you can come across (pun intended) that you'll find a welcome sight. Extra bundles of newspapers are randomly placed along your way; running over them replenishes your 10 paper supply of "projectiles."

Entertainment Section

Sound effects are sparse throughout the game. There is a lively little ditty that plays throughout your route, and a different one that accompanies your romp through the practice track. These two tunes can be toggled on and off by depressing the "S" key at any time. The other sound effects include plunking a newspaper into its correct receptacle, breaking windows, wacking the moving obstacles, lopping off the top of grave stones at the cemetery, and hitting bulls-eyes on the practice track. I think some people would be annoyed by the music (I was too busy trying to survive to worry about it much), so the ability to toggle the tunes on and off is something that I think all games with these types of audio delights should have.

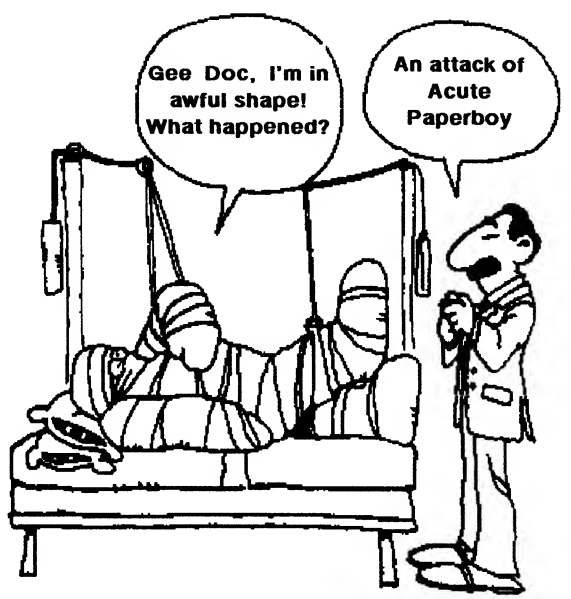
Obituary Section

As stated earlier, six and only six lives are yours to make it through the game. Any collisions will leave you on the ground, tangled in your bike, with your newspaper container dropped squarely on your head! After that sixth and final life, the program takes you to a new "Front" page. On it, the headlines highlight the fact that the "PaperBoy calls it quits." Also, there are several choice comments by former subscribers. You are then taken to a final screen where the latest score and the top score of that session is shown. (Top scores are *not* written to disk) Pressing the fire button will bring you back to the first "Front" page where you can again choose the same, or different Street to attempt.

Advice Column

I'm assured that this game is a good conversion from the coin-op, and I must admit that I never played it in the arcades. I'm sorry to say there are several down sides to this game. The most notable in my opinion is the lack of playability, which I found very repetitive. There just isn't a lot to catch and *hold* your attention, especially if you have a good memory and plan for what you know will be coming your way. The response of the PaperBoy sprite in conjunction with operating the joystick is average, at best. Pushing forward to speed up, and pulling back to slow down works as expected, but moving to the left or right with any haste doesn't work (read frustrating). I lost many a life till I got the hang of just how (un)responsive the controls are. The only control that handled in an expected way was the trigger, which when pressed, tossed a paper--and this tossing can *only* be to the left. If you were a fan of the game at the arcades, then add this conversion by Elite to your software library. However, if you have the ability, play test this game at a store, your user's group meeting, or at a friend's house before you spend money on this game. Otherwise, I can't recommend it.

[PaperBoy, by Tengen. Conversion - Visual Art by Elite, Distributed by Mindscape, Color monitor or TV, Joystick Required]



Karateka

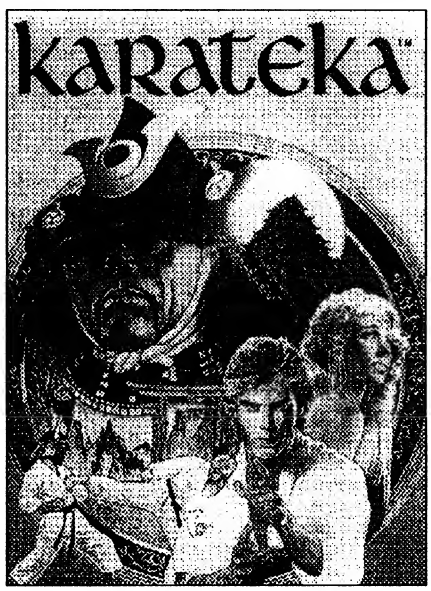
The Karate Master Returns

Review by Stan Beville

We diehard Atari XE/XL/XEGS owners find ourselves in a frustrating state of affairs these days: we are blessed with the best 8-bit computer in the world, yet new software releases for it are diminishing. What was once a flood has now dwindled to a trickle.

But all is not totally bleak. There's still a large base of commercial programs available through local dealers, mail order and computer shows. And there is a wide range of quality public domain programs available for minimal cost through various sources.

The encouraging news is that the Tramiel family hasn't abandoned the 8-bit line, at least not yet. Along with a number of new programs, Atari Corporation has been rereleasing some classic games from days gone by. Many of these older programs are as much fun to play today as they were when first released four or five years ago. Take for example, *Karateka*.



An action-packed game, *Karateka* is suitable for adults and youngsters alike. Originally marketed by Broderbund in 1984, the Atari disk version came out in 1985. Atari recently bought the program rights and is now distributing it in cartridge form.

The storyline is a simple one: you are a karate master--a Karateka--whose mission is to rescue your beloved Princess Mariko from the clutches of the villainous Lord Akuma. Achieving your goal won't be easy. You have only your hands and feet as weapons to fight your way past Lord Akuma's legion of guards. Should you manage to defeat the warlord's minions, you must face Akuma himself. Defeat him and the princess is yours.

Karateka is basically a one-player game. However, there is a two-player mode for honing your skills against a human opponent. You can elect to use either the keyboard or a joystick, either of which provides fast response to your input. It takes only a short while to learn the various movements with the joystick--there are no complicated jumps, flying kicks, or turns to contend with.

One of the game's most unusual aspects is its scoring system. Unlike most other computer games, *Karateka* does not award points. Success is measured only by whether or not you rescue the princess.

You will find Akuma's warriors to be quite skilled. And as you advance deeper into the castle your opponents become even tougher. Each warrior has his own particular strengths. Practice and experience will enable you to develop the best strategy for overcoming these strengths.

At the bottom of the play screen are health indicators (arrows) for you and your opponent. As you fight, your strength is diminished with each hit from your opponent. Likewise, your blows deplete your adversary's supply of arrows. Let your arrows run out and it's curtains. Should you be defeated by one of Lord Akuma's henchmen, you have no extra lives available to continue your quest. If you want to play again, you will have to restart at the beginning.

Karateka's greatest strength is its super graphics. There are no blocky figures or jerky movements--the character's shapes are quite human, and their movements are smooth. The only complaint I have with the game's design is the dreadfully slow movement as you go against your first opponent. I don't know if this is by design, or is a limitation imposed by the detailed graphics of the setting. In any case, once you defeat the first warrior, player movement speeds up quickly.

Lord Akuma has a couple of surprises for the unwary hero. The three-page game manual doesn't mention them, and I won't spoil things for you by revealing them here. Part of the fun is in discovering them for yourself.

It will take some time for the average stick jockey to gain the requisite skills needed to successfully complete the game. You will find that, as in real life, patience and timing are just as important as skill and daring in accomplishing your mission.

Once you have developed the ability to consistently win, you may find that *Karateka* has lost its freshness. The problem is that there are no higher levels or variations to explore, and the opponents never vary. Still, at $19.95 retail, *Karateka* will provide hours of entertainment at a reasonable cost.

Stationfall

An Expert-level Role-playing Game

Review by C. H. E. Firewick

"As a result of your heroics (in Planetfall), you were offered, and quickly accepted, a juicy promotion. Goodbye Ensign Seventh Class--now you are a lieutenant First Class! No more scrubwork! No more bathroom details! No more cleaning of the grotch cages!... Oh, how naive you'd been. Your daily routine simply replaced tedious scrubwork with tedious paperwork.... Why, just look at today's 'thrilling' assignment: scooting over to Space Station Gamma Delta Gamma 777-G 59/59 Sector Alpha-Mu-79 to pick up a supply of Request for Stellar Patrol Issue Regulation Black Form Binders Request Form Forms..."

This excerpt from *Stationfall* details your basic task. It would seem straightforward enough to do, under normal circumstances. But, as anyone who has played an INFOCOM game will tell you--NORMAL this ain't!

When you get the game, quickly send in for the hint book and maps (especially the maps). Then, while you wait for the maps to come, you can sit back and rip your hair out trying to get off square one! In my opinion this is an expert level type of role game. So, if you're just starting out, pick up an easier one to complement this; something to try when your frustration level passes its peak.

Clues in this game are often subtle, but sometimes are so obvious that you can miss them. For example, you begin on deck twelve. A locked door is to port, exits aft (forms storage room) and starboard (hallway). Going starboard you reach the cargo bay entrance. Exits are fore (robot pool) and port (where you came from). Going fore (get one of three robots); the exit is aft (cargo bay entrance). All you have going for you (not described above) is a door pass that needs to be validated to work (and you don't have the stamp to do it, nor are the robots any help)! I'll let you stew on that for awhile, but I'll leave the hint near the end.

You need to continually take notes. Question everything, take nothing for granted, and get it all done fast! You are working within a time limit (they forgot to tell you that, didn't they?). This might also be a good one to kill a box of computer paper on (using the SCRIPT command).

When you get to Space Station Gamma Delta Gamma, nobody's home! Now you need to find out what happened to the 45 people who live there as well as to get the Request Form Forms. Shouldn't be hard to check out the place, should it? Unfortunately, the main section has 6,823 square meters of floor space (that's over 20,000 square feet!). All this space is spread over nine levels. Plus, there is a sub-module attached to it! These are "standard" Patrol design, specific function units, such as scientific, military, or diplomatic sub-modules. You also will find a village attached to the main section. Eventually, you will come across Floyd, your robot friend from PLANETFALL and Plato, a robot who may be a friend or a foe.

Overall, I have to rate *Stationfall* an '8' on a scale of 10. It may frustrate you, but it keeps bringing you back for more!

****

Clue follows, Don't read if you don't want help!!!

****

When you are in a cargo bay entrance, it is just that, an entrance. Try going a bit more starboard from there, and you should be able to progress from that point. This way you can be stumbling around in the space station while you wait for your hint book to arrive.

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It's All Relative is $25.00 Postpaid Worldwide
Demo version with 15 record limit $5.00 Postpaid
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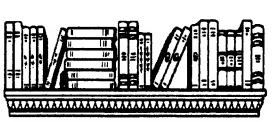

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Florissant MO 63031
(314) 831-9482

Draw7

XE Drawing Program

Review by Lincoln Hallen

(Not a very exciting title for a pretty powerful piece of software. Why *Draw7* and not Picasso? This little program has been very well thought out, and if it were the only one used by an XE person with a C. Itoh Prowriter, it would probably be all one needs. As the title explains it is a drawing program in which your main source of input is with a joystick and control is with the keyboard. Unlike most other drawing packages, there are no pull down screens or icons to rely on nor does it use a drawing pad. Instead, there are over 73 keyboard commands!

Features. This drawing program is made for the 130XE, although no explanation is given. I assume it uses more banks of the 130XE's memory. It doesn't take long to boot it up with BASIC installed. The main menu, which you never see again until you reboot, consists of four options: 1. run the Drawing program; 2. run the documentation which is on the reverse side of the disk; 3. list the commands only (all 73); and 4. exit. As with most selections, a single keystroke will give you the option. This is a good feature unless you like the chance to change your mind right as you are selecting. I first selected to print out the commands only (#3) and after a quick glance realized I should have gone for the entire documentation (#2).

When I selected option 1, I got a blank screen with a blinking cursor in the middle. By moving the cursor around with the joystick, I was able to draw crooked lines. A quick glance at the command list revealed that I could control the following graphics areas:

- **General Use**--controls the cursor, toggles in and out of other command areas, printing (C. Itoh only), font changes, and help. Whenever you have questions you can enter "?" for help. It gives you the command list which I did not find to be real helpful on the screen.
- **Text Mode**--this feature allows the user to type with various fonts at different sizes right over the picture. I suppose you could use this feature if you wanted to make vugragh masters for presentations or just make announcements or other graphic presentations. As with other graphics programs there is no "Backspace delete" in the text mode. The user has to move the cursor over the unwanted letters and blank out or type over. In addition, adding text over a picture wipes out the picture underneath the letters, which makes reading your text much easier.
- **Console Key** (color) Commands--you are able to change drawing colors and intensities.
- **Color Commands**--here are 10 commands to control screen colors and background. When it comes right down to it, however, once you start printing, it still comes out black and white.
- **Drawing Commands**--there are a bunch of drawing features, common to most graphics programs, to control the cursor. For instance, you can make circles, rectangles, lines and rays. Then you can fill any of these in and even change the color of the fill-ins.
- **Record/Playback Commands**--there are 12 commands to control recording, playback, and saving to or from disk.
- **Special Effects Commands**--these give the user the ability to flip the screen top to bottom or left to right and to play with the graphics and zoom modes. In addition, you can do vertical or horizontal or quarter mirror or duplicate images. This has very interesting effects.

Documentation. By printing out the Commands Only list on my Panasonic, I got a straight print dump with no page breaks. It used only 40 columns. I wish there had been some way to get all the commands on one page.

Next I started printing the entire set of documentation and found I had 20 pages of text with no page breaks, which amounted to 18 feet of continuous instructions! The other annoying part was that the text used 74 columns and split any word up at the end of the line (words like i-f, f-ile, k-ey, etc.). Obviously the text was not set up with so-called Epson compatibility or *AtariWriter* text controls.

At any rate, I don't think I have seen so many instructions in so much detail since trying to read an IBM manual. I'm sure the instructions are very complete, but who has the time to read them all? In a few cases where I thought that the software couldn't do something (e.g., formatting a disk if you forgot to have one ready to save a file), I later discovered that the feature was buried somewhere in the documentation but never showed up on the command summary list.

The good news, even after my whining, is that the documentation is complete, probably too complete.

Ease of Use. Once a person memorizes and uses the many commands over a period of time, then *Draw7* can be a powerful graphics tool. However, a casual

user would probably have to relearn each time he or she wanted to use it. What would make it easier would probably be the use of little images or pop–down help menus for the various command modes.

Draw7 does not use the commonly available drawing pads for easier free hand drawing.

The big disadvantage as far as I am concerned is the lack of the ability to easily print out your graphic drawings. If you have a C Itol Prowriter, no problem. It is possible to retrieve your drawing using *Micro Illustrator* or *Micro Painter* formats and then print it out with another graphics print program––but then why use *Draw7* if you have another graphics program?

Value. A program like this would usually retail for $29.99, however, since this is in the "shareware" circuit, a $5 or $7 contribution would be well worth it. Anyone with an XE who doesn't mind the hassle of printout, would probably like to have this software because of the myriad of features which exist.

Conclusion. If you are interested in getting this program, either check your User's Group library or contact David S. Beifeld, 12900 Lyme Bay Drive, Herndon, VA 22071. I understand that those making a nominal contribution will receive a disk of playback and graphic files that highlight many interesting and colorful *Draw7* capabilities.

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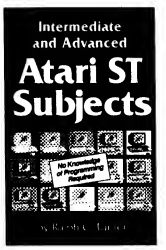

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ICD

by Frank Kweder

GTIA KAL1

I can't remember the source or even what the original graphics mode was. I used Graphics 10 to increase the color shadings.

```
10 GRAPHICS 10
11 POKE 704,0:POKE 705,34:POKE 706,70:
POKE 707,136:POKE 708,170:POKE 709,198
:POKE 710,228:POKE 711,250:POKE 712,26
15 FOR J=0 TO 79
20 FOR I=0 TO J
35 READ C:IF C=-1 THEN RESTORE :READ C
36 V=2.422
38 COLOR C
40 PLOT I,J*V:PLOT 79-I,(79-J)*V
42 PLOT 79-I,J*V:PLOT I,(79-J)*V
45 PLOT J,I*V:PLOT 79-J,(79-I)*V
47 PLOT 79-J,I*V:PLOT J,(79-I)*V
50 NEXT I
60 NEXT J
65 GOTO 15
70 DATA 1,1,1,2,2,2,3,3,3,4,4,5,5,5,6,
6,7,7,7,7,7,8,8,0,0,0,-1
```

GTIA KAL2:

Almost ths same as above, but slightly modified to get a certain pattern. Color cycling has been added. Press START to reverse direction of the cycling.

```
10 GRAPHICS 10:GOSUB 90
15 FOR J=0 TO 40
20 FOR I=0 TO J STEP 0.6055
30 READ C:IF C=-1 THEN RESTORE :READ C
35 V=2.422:COLOR C
40 PLOT I,J*V:PLOT 79-I,(79-J)*V
42 PLOT 79-I,J*V:PLOT I,(79-J)*V
45 PLOT J,I*V:PLOT 79-J,(79-I)*V
47 PLOT 79-J,I*V:PLOT J,(79-I)*V
50 NEXT I:NEXT J
64 TEMP=PEEK(705):POKE 705,PEEK(706):P
OKE 706,PEEK(707):POKE 707,PEEK(708):P
OKE 708,PEEK(709):POKE 709,PEEK(710)
65 IF PEEK(53279)=6 THEN GOSUB 90:GOTO
70
66 POKE 710,PEEK(711):POKE 711,PEEK(71
2):POKE 712,TEMP:FOR W=1 TO 5:NEXT W:G
OTO 64
70 TEMP=PEEK(712):POKE 712,PEEK(711):P
OKE 711,PEEK(710):POKE 710,PEEK(709):P
OKE 709,PEEK(708):POKE 708,PEEK(707)
71 IF PEEK(53279)=6 THEN GOSUB 90:GOTO 64
72 POKE 707,PEEK(706):POKE 706,PEEK(70
5):POKE 705,TEMP:FOR W=1 TO 5:NEXT W:G
OTO 70
90 POKE 704,14:POKE 705,34:POKE 706,70
:POKE 707,136:POKE 708,170:POKE 709,19
8:POKE 710,228:POKE 711,250:POKE 712,2
91 POKE 53279,0:POKE 704,0:RETURN
100 DATA 1,1,1,2,2,2,3,3,3,4,4,5,5,5,6
,6,7,7,7,7,7,8,8,0,0,0,-1
```

Magic Carpet

Graphics 3 adapted from an Apple program most probably in Creative Computing. A fast moving kaleidoscope decked out as a magic carpet.

```
10 GRAPHICS 19:V=2:G=8:D=2:POKE 711,82
:SQ=23
11 DL=PEEK(560)+256*PEEK(561):POKE DL+
3,71:POKE DL+6,6:K=PEEK(87):POKE 87,2
12 ? #6;" magic carpet":POKE 87,K
13 COLOR 2:PLOT 8,4:DRAWTO 8,23:PLOT 3
1,4:DRAWTO 31,23
14 FOR X=5 TO 22 STEP 2:PLOT 4,X:PLOT
6,X:PLOT 33,X:PLOT 35,X:NEXT X
15 SETCOLOR 0,V,4:SETCOLOR 1,V+3,6:SET
COLOR 2,V+6,4
20 FOR A=2 TO 20:FOR B=2 TO A
30 COLOR INT(PEEK(53770)/85)+1
40 PLOT B+G,A+D:PLOT SQ-B+G,SQ-A+D
42 PLOT SQ-B+G,A+D:PLOT B+G,SQ-A+D
45 PLOT A+G,B+D:PLOT SQ-A+G,SQ-B+D
47 PLOT SQ-A+G,B+D:PLOT A+G,SQ-B+D
50 NEXT B:NEXT A
60 V=INT(PEEK(53770)/17)
65 GOTO 15
```

Winter Challenge

A Good Balance of Playability and Stunning 8-bit Graphics

Review by Rich Link

Just when you thought there were no more new titles to be found for the 8-bit Atari market, along comes Thunder Mountain with a game many have been asking for, *Winter Challenge,* World Class Competition. This is a collection of events from the Winter Olympics, along the same lines as EPYX's Summer and Winter Games series.

This package contains five Olympic events: Downhill, Ski Jumping, Biathlon (cross country skiing and shooting), Giant Slalom, and 2-man Bobsled. Each event pits you against the clock, and up to six players can compete at one time. Games may be played one at a time, in different combinations, or all in succession. Gold metals are tallied after each event to determine an overall winner. The game comes on two disks and occupies four full sides. A minor quibble here: the game has copy protection on the first side, making backups difficult. And the protection will not allow the use of high speed operation on modified drives. I've not tested it on an XF551 drive which runs at a slightly faster speed than the standard 1050 Atari drive.

Playing *Winter Challenge* is an enjoyable experience. The games are well designed with excellent graphics. Scrolling backgrounds and interesting details abound thoughout the game. Game play is generally consistent, although the difficulty varies with each event.

Starting with the downhill racing, you are pitted against an ever narrowing obstacle course of trees and occasional logs. Joystick movements control the speed and direction of the skier as you drift from side to side and jump the obstacles. One interesting touch is the "goggle view" in the lower right hand corner. This is a needed addition, as there are times when the skier's body blocks your view of impending doom! This event was my weakest, as I struggled to reach the bottom. It took a second look to realize that each event can be replayed, something I missed in the instructions.

The Ski Jump is an excellent looking event. As the jumper makes his way to the starting line, you see a beautiful view of the slide with TV cameras and a full perspective. A tap of the joystick and you're off! Again, the stick is moved up/down and left/right to align the skis. Total points are awarded for both distance and style. A botched landing results in a frustrated skier pounding the snow! A total of three jumps completes the event.

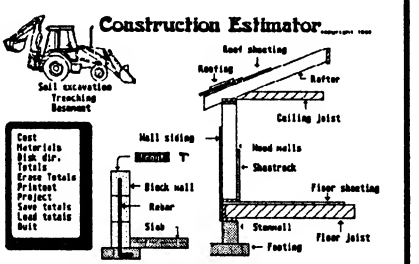
The Biathlon is a combination of events. The key here is developing a rhythm during the skiing portion, and smoothness in shooting. Points are given for speed and accuracy, with a heavy penalty for each missed target. Again, the graphics are outstanding, with bridges, streams and mountains.

The Slalom is a three-heat event, racing downhill through a series of flags. Movement left and right is very quick, and more often than not, you will find yourself plastered against the fence! This one takes some work to master, but it is possible to complete the run. A slightly slower joystick response might improve the "feel" of the event, but it would probably make for a slightly harder game as well.

The final event is my favorite. The bobsled run is a three- to four-minute run down a winding tunnel of snow. Here, the scrolling mountains and sky in the background, along with the trees streaking by, make for an excellent looking game. A slight tap on the button applies the brakes, keeping you from being thrown up to the top of the wall with a resulting crash. The key here is concentration and quick reflexes. With a total of three runs, all of the players have adequate time to get the feel of the course. Winning can often be a matter of a second or less.

So there you have it. Thunder Mountain has produced a winner with *Winter Challenge,* combining a good balance of playablity and stunning 8-bit graphics.

Construction Estimator



Construction Estimator 2.0
(Color or Monochrome)

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World Class Soccer

A "Lean & Green" Soccer Machine?

Review By Al "Philo" Beddow

Expert vs Novice

There are two ways to have a piece of software evaluated. First, have someone who is fully versed in the type of software being evaluated (such as CN's Robert Millard reviewing "Ultima XVI"). Second, choose a reviewer who has limited experience with this particular type of program (such as my wife, Wilma, reviewing "Ultima XVI." She only plays arcade games, and infrequently at that!).

While I am not a "Robert Millard" of the video arcades, I have played my share of games. Since Rick Davis's *World Trophy Soccer* (RDWTS) can be played by one or two players, I recruited my wife to play a few games.

Documentation

The instructions to RDWTS are short but not so sweet. The manual is about the size of 1/2 a sheet of paper and tries to explain everything in just 12 short pages. One full page is taken up with "Amiga-specific" instructions, and after reading them, it becomes evident which computer the publisher (Virgin Mastertronic Group) is targeting the most. The Atari ST loading instructions simply states "1. Insert the disk into the drive and turn on the computer and monitor. The game will load automatically." Needless to say it doesn't.

After the game loads, you are presented with a menu of options that let you select the length of the game, volume, difficulty level, audio on/off, and one or two players. After selecting the number of players, you have to choose which country you will represent, from a list of four. The menu is very difficult to use because of its touchiness when trying to move from option to option.

Five pages are devoted to describing "soccer: the game," explaining what you need to know about the sport in order to play it. On the last page is a biography of Rick Davis. This doesn't leave much room to explain how the game operates, and actually only about one and a quarter pages are used to do so.

Stealing It

The game controls are simple. Your player runs in the direction that you move the joy stick. The fire button has one offensive and two defensive functions. On offense, it is used to kick/pass the ball and on defense it is used to either change your control to the man closest to the ball or to "tackle," which is an attempt to steal the ball from an opposing player, if you already control your man closest to the ball.

The men which are not actively being controlled don't just stand there like drift wood. They will actually run after the ball and try to steal it from the opposing player (although they only do this about 50 per cent of the time). The game mechanics are fairly straight forward. Once you get control of the ball, you "move" it down to your opponents goal, and try to kick it in past the goalkeeper. It helps to kick the ball down field, wait a second, the press the fire button (to change to another man) and grab the ball again. This seems to keep your opponent off guard. But note, this manuever is not as effective against the computer as it is against another player.

Skewed Perspective

The game is not played from the athlete's point of view. Instead you look down onto the field and toward player two's end of the field at the top of the screen). When player two gets close enough to score, the view shifts to that from behind player one's goalkeeper. There seems to be no real control over the goalkeeper, except for moving left and right. On several occasions the goalkeeper made a "daring" leap for the ball, but usually at the wrong time and on a few occasions just laid down on the ground. As I eventually discovered, this is caused by hitting the fire button, although the manual is mum about it.

The story is different for player two. When player one gets close enough to score, the view shifts to looking at the goalkeeper from behind the man with the ball. This does not allow for great control of the goalkeeper by player two. I would rather that the authors had provided the same view to player two as player one has when a goal is being attempted. Whenever either goalkeeper stops the ball, he automatically throws it straight ahead. You have no control over where it goes.

Whenever a goal is scored, the ball goes out of bounds, or it is time to "kickoff," the referee appears on the screen, blows his whistle, and makes the call. This is well done but if it weren't for the little "voice bubble" coming out of the referee's mouth (as in a comic book), I would not know what he was saying because there is no sound, except for the whistle.

My wife enjoyed the game. Well, enjoyed may not be the right word because as we played, she kept yelling at me for "tripping" her, catching the ball, etc. She got a kick out of how the men crumble, roll across the grass, and end up

seeing "stars," when they are tripped. She howled with laughter when two guys with a stretcher occasionally came running out and picked up the injured man. I guess this is the authors way of showing you how severe an infraction it was, and but still it is a nice touch.

Limitations

When making a free kick, you can only aim the kicker in one of four directions (up, down, left, and right). This does not allow great placement of your kick, and coupled with the fact that you usually can't see where most of your men are, makes the free kick almost useless. On a goalie kick, or on a free throw, both players can place their man (the receiver and the "blocker"), but you only have three to five seconds to do this before the ball is automatically thrown. Make sure that the receiver is not too close to the thrower, because the ball will go right over his head.

One feature left out of this version is the ability to pause the game. Unlike playing the game at the arcades, my computer time is usually interrupted by such things as answering the telephone and other unavoidable invasions. Unfortunately, Murphy's Law was in full force as I received a few phone calls and the game started by itself and of course I also couldn't pause once the game was playing either. The pause feature is something that really shouldn't be left out of the computer version of a game.

After I playing the game, I tried to find an arcade that still had RDWTS, so I could compare the two. But, no luck.

Enjoyable

Overall I enjoyed the game. It was easy enough for two novices, my wife and myself, to play, while equipping you to challenge the best players around. The graphics are excellent and the screen scrolls smoothly. The men are easy to control and the response to the joysticks is excellent, except for the problems previously noted. I was never really impressed with the quality of the Mastertronic games that were available when I was using my Commodore 64, But I am impressed with this one for the Atari ST. While my wife and I are going to be playing RDWTS for some time, I recommend that you wait for the price to drop from the $25.00 I have seen it advertised for to about $15.00.

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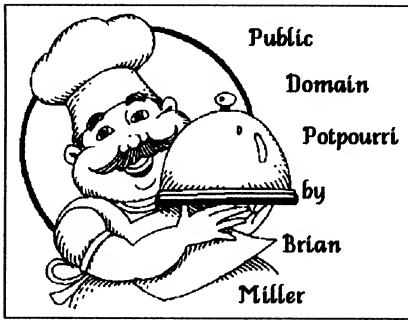


DC Formatter Quick Index 1.6 Virus Killer 2.2

Once again I have wrestled with the choice of what public domain and shareware software to present for this month's column. The three programs I have selected may not be new or novel to some, but they are bound to be helpful to most ST owners.

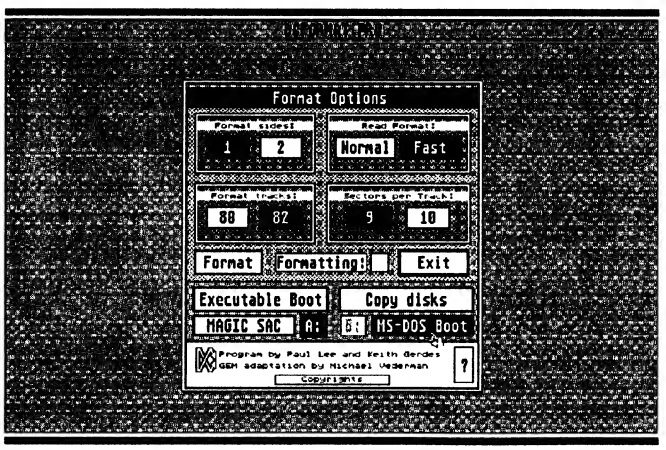
All three programs are similar in at least two respects. Each is a useful utility, and each fully exploits the ST's graphics capabilities. Two might be called "Teasers." By this I mean the program advertises other shareware software which is available by the author.

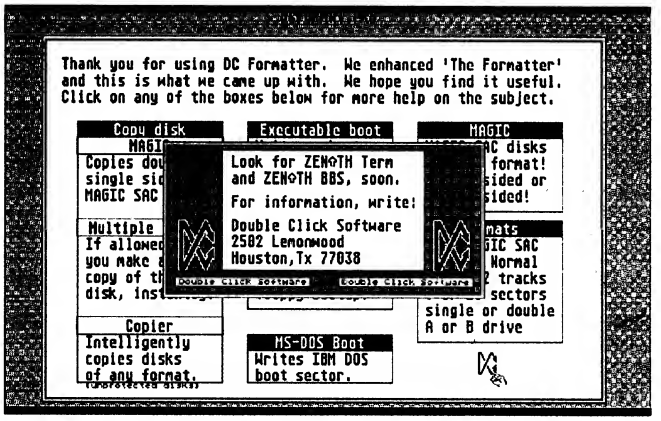
DC Formatter

[Version 2.2/Version 3.02, Paul Lee & Keith Gerdes, Double Click Software, 2502 Lemonwood, Houston, TX 77038.]

DC Formatter is, as you may have already guessed, a formatting program for the ST. Why would anyone need another formatting utility? Well, if you do not expect to share diskettes with an IBM machine, don't have a Magic Sac or Spectre, or have already traded up to TOS 1.4 or Spectre GCR, then DC Formatter may be of limited value. However, if these characteristics do not apply to you, then DC Formatter is worth considering.

The program has excellent graphics, and a version is available for both color and monochrome monitors. The program's display is crisp, pleasing, and easy to understand. DC Formatter permits a wide variety of formatting options. You can format for single- or double-sided disks. You can format for 80 or 82 tracks, and 9 or 10 sectors. You can also choose a fast or normal format.





I really like its ability to write the MS-DOS boot sector on the disk. This means you can use a diskette formatted with DC Formatter on an IBM machine without complaint. For the many of us who still use TOS 1.0, the boot sector is not written. Hence, sharing disks with IBM can be somewhat of a chore. You either have to format the disk on the IBM, or find a utility that will do this for you. With DC Formatter you simply click the box with this option, and it is done.

DC Formatter can format disks for use with Magic Sac or Spectre. I find it easier to make Magic disks with this program than I have with the equivalent program packaged with my Magic Sac.

The program also lets you write an executable boot on the diskette it formats. You could use this feature to by-pass your hard drive or to set the resolution of your monitor.

Version 2.2 of DC Formatter provides a handy Help Menu. It cogently explains each of the formatting options. You access the Menu by clicking on the window with the feature you want to learn more about.

I have given you a glimpse of DC Formatter's prowess as a formatting program. The program can copy disks, too. Again it shines in its versatility, since you can make copies of ST or Magic disks in the same environment. You don't need to format the disks first, since DC Formatter will take care of this task as it copies.

Version 2.2 of DC Formatter can be found on Current Notes Library Disk #185. This disk contains several other formatting programs. Version 3.02 is available on Current Notes Library disk #385. The

newer version upgrades the formatting options for both Spectre and IBM disks.

DC Formatter Version 2.2 was distributed as a Public Domain program. The authors used this version of DC Formatter to advertise their Zen Term and BBS programs. For Version 3.02, sending a donation entitles you to the help option and a Desk Accessory version of the program. I have found DC Formatter to be a very helpful program which I enjoy using, and one I feel I can recommend.

Quick Index 1.6

[Darek Mihocka, P.O. Box 2b24, Station B, Kitchener, Ontario N2H6N2 Canada. Registration Fee: $30.00.]

Have you ever wondered whether your ST is working up to snuff? Quick Index by Darek Mihocka is a shareware program which conducts a variety of tests to give you, very precisely, just this answer. Among the tests actually performed include: CPU Fetch, Disk RPM, Bios Scroll, Bios Text, and Bios Draw.

You can select individual tests, or you can choose to have all of the tests conducted. Your monitor will give you a visual readout for each stage of the testing. When the tests are complete, your ST's grades are posted for your review. For those who are technically minded, this display will be most helpful. For those of us who are less skilled in interpreting the data, documentation is available.

Mr. Mihocka's program takes full advantage of the GEM environment. Quick ST 1.6 is visually very pleasing, and easy to use. You can select an information option which gives detailed instructions for registering the program. For the $30.00 fee you get the whole package of Quick programs including Quick ST 1.6, and the documentation for Quick Index 1.6. Quick ST is the rival of Turbo ST. This program enhances many of the operations of your ST by making better use of TOS.

For grins, I ran the Quick Index battery of tests before and after I installed Quick ST. The difference in some areas was dramatic. On the Bios String test, for example, my ST performed at %100 before installing Quick ST, but over %1100 after.

Quick Index can be found on national BBS services, and I dare say many local Boards as well. It is well worth the Registration Fee since your money will buy the whole line of Quick and quite useful programs. If you prefer, you can have the Darek Mihocka Utility Collection on Current Notes Disk #375. Either way, be sure to register your use of the programs.

Virus Killer 2.2

[George R. Woodside, 5219 San Feliciano Drive, Woodland Hills, CA 91364.]

With all the news we are "exposed" to about the prevalence of computer viruses, most enthusiasts are anxious to protect their "systems" from contamination. Virus Killer 2.2 is a helpful utility designed to keep your ST healthy.

Virus Killer can read data on diskettes in either the A or B drives. It can detect the presence of a virus or anything suspicious on your diskette. If all is well, the screen will display a Happy Face. I usually cringe at the sight of Happy Face and Have a Nice Day symbols. However, I consider Virus Killer's Smiley Face on my ST screen a most reassuring omen.

Virus Killer will display a large ? mark if it finds anything suspicious. A Devil's Head lets you know the disk demonstrates all the traits of infection with a computer virus. An alert box with appropriate instructions warns you of infection from a known computer virus.

Virus Killer is easy to use. Its icons are clever and intuitive to understand. Information about the disk can be displayed to the screen, printed out, or harmlessly saved to a disk.

Some Virus programs merely warn you of a problem, leaving you to seek a cure elsewhere. Not so with Virus Killer! This program gives you the option to kill the virus or remove suspicious data. I recently had the occasion to use the program in just this way.

I received a postcard from the makers of a piece of commercial software that a group of registered users, including me, had been sent infected program disks. I wasn't thrilled with this bit of news. Between you and me, I would have much preferred notice of a free upgrade.

Fortunately, I remembered that I had a copy of Virus Killer. I quickly put it to work. The program flagged the disks as questionable. I employed the cure and afterwards analyzed the disks once more with Virus Killer. The disconcerting question mark was replaced with the Happy Face symbol.

While I am not complaining, it would be nice if Virus Killer were able to conduct its search and destroy missions on hard drives as well. However, checking all floppy disks before copying to the hard drive may give some protection against spreading a virus to the rest of your computer system.

Mr. Woodside's program is distributed freely as a public domain program. He invites those who discover a virus, to send him the disk in question for further analysis. If he finds a virus, he will add its cure to the list of those already known.

I hope you will find these programs worth your attention. That's it for this month, and please support our shareware authors.

Devil Anytime you see this devil, be cautious. It means that the disk being examined has all the characteristics of a virus. The boot sector contains executable code.

Puzzle Puzzle

The Old Puzzle Done Electrically

Reviewed by Al Beddow.

For the Mono Gang

I have just a monochrome monitor for my ST and can't stand having to drag the whole mess to the TV in order to play a game that only runs in low or medium resolution. If you are plagued by a similar problem, then you know what a treat it is to come across a game that works in high resolution and is worth playing. Well, one answer to our prayers is here. *Puzzle Puzzle* is a shareware video puzzle from Tommysoftware in West Germany. *[Also available as disk #54 in the CN Library. -JW]*

The premise of the game is fairly straightforward. Put together a 16 piece jigsaw puzzle by dragging the pieces into place with the mouse. Sounds simple, right? Well, the authors (all ten of them) have added a little twist to this game by making the unused pieces move around the screen. The unused pieces are kept around the edge of the playing area while you assemble the puzzle in the center of the screen. The right hand quarter of the screen is taken up by a four item menu. Your choices are (from top to bottom): End the game, "right face," "left face," and music on/off.

Put Your Electric Finger on It

You select a piece by placing the cursor on it and holding down the left mouse button while dragging the piece to where you want to place it. Then, let go of the button to release the piece. If you have tried to place the piece where it doesn't belong then it "scoots" right back to where you got it. You must then go back and pick it up again in order to try another spot. While this is, at first, an annoying way to find out that the piece doesn't fit, it is actually necessary since all of the pieces have identical shapes. I liked the fact that all of the pieces were the same shape because it made the puzzle that much harder than a regular jigsaw puzzle of the same size.

No example is given of what the puzzle looks like. You can only guess what the figure might be until you have assembled a particular puzzle for the first time. All of the puzzles are quite detailed. In several of the puzzles the images of a number of the pieces will appear to be almost identical, making it even harder to figure out how they fit together. When you complete the current puzzle, you select the next one by clicking on either the "left" or "right" face on the menu.

Ever Changing

Now here's the really neat part. I have counted 15 different puzzles and each puzzle is actually the first piece for two other puzzles. Which of the puzzles you get is chosen by which face you click on. This creates an interwoven selection of puzzles which adds variety to the game by changing the order in which the puzzles are completed while avoiding having an actual end to the game. I was surprised at how naturally the pictures go together and by the variety in the pictures themselves.

The first puzzle is of a person's right eye and is a tough first picture. I won't tell you what comes after that. But have no fear, even though they do become more difficult, you'll get the hang of the game in no time.

The music, according to the program's introductory screen, is called "Ohrwurm-music" [Ed: literally worm-in-your-ear music in English] and, while nicely done, I found it annoying and learned to immediately turn it off. I guess that while it is fine for the original German audience, it loses something while crossing the Atlantic.

Some Needed Options

I feel that the authors have done an excellent job, but there are several features I would like to see in later versions. First, a save game option. On several occasions, while playing the game in preparation for this review, I had to stop because of the late hour. Each time I went back to finish a puzzle I had to start from the first puzzle. Second, I would like to see more than just 15 pictures. When I finally was able to sit down for a few uninterrupted hours to finish the game, I was disappointed to find so "few" puzzles. After seeing a puzzle for the third or fourth time, it becomes relatively easy to it put together in record time. Third, a "puzzle editor" so that you could take your own hi-res bit-mapped drawings and turn them into puzzles and trade with your friends. Last, the option to store the pictures in memory (if you have enough). As it stands, each puzzle must be loaded individually and this takes time if you are using a floppy versus a hard drive.

The registration fee is $10.00 and for an additional $10.00 you can get the source code in CCD's Pascal V1.4. Overall, *Puzzle Puzzle* is a quality game that is well worth playing.

CN MAGIC LIBRARY

Here is a complete listing of the Current Notes Magic Sac library of Macintosh PD programs. These programs are on ST disks in Magic format for use with the Magic Sac Macintosh emulator for the Atari ST. Some of these disks also work perfectly well with the Spectre Macintosh emulator. All of the font disks, clip art, commercial demos, and hypercard disks will work with Spectre. Many of the other disks will also work, but we have not tested every file on every disk to confirm that they will run with the Spectre.

Disks numbers prefixed with an **M** are for the **Magic Sac** and those with an **S**, listed later, are for the **Spectre**. Disks numbers followed with a **D** indicate a **Double-sided disk** format. All disks, both SS and DS, are $4.00 each.

Desk Accessories

M8: DAs #1. 3DTTT Game, Art Thief, Ascii, Bagels Game, Big Ben, Calculator, CopyFile, DA Tester 1.5, Delete File, Desk Acc Tester, DeskZap 1.2, Eject&Reset, Extras, File Hacker DA, File Tools, Font Grapper+, Font Grapper3, Hex Calculator, HP 12c, MemScan, MemWindow, MerriMac BlackJack, miniWriter, MockTerminal, MockWrite, Moire, MW Count, Other 3.0, Puzzle, Reader, Rubik's Cube, Sampler, Scrapbook, Scientific Calculator, SetFile 3.3, SkipFinder, TheBox, Tiler 1.5, Trails, Transfer, TrapList, Utils, Word Count, Zoom Idle.

M18: DAs #2. Alarm clock, Art Grapper+, Calculator+, Choose Scrapbook+, DA File, Disk Labeler, DiskInfo 1.45+ SICNs, Explorer, Gone Fishin', Hex Calc, Label Maker, MemWindow, MiniWRITER 1.34, Multi-Scrapbook, MW 4.5 Counter.DA, Popup 1.0, ProCount, ReadiPrinter, Ruler, SFstartup 1.0, Skipfinder 6.1, Sleep, Stars 1.6, Stars II, Sysfonts, TeaTime, Timer.

M46: DAs #3. 3D Tic-Tac-Toe, A-Bus ID Poker, Abacus, Calendar, Cheap Paint, Collapse, ConCode, Crabs2, DAFile, DAFont, Disp.Msg, Double Apple, Executive Decision, FatMouse, FixPic2.0, Flow, Fun House, Func Keys, Font, Idle, KeyMouse, KnockOut, MultiScrap, MW to Text, New MiniDos, Orig Clock, PaintDA, Poker, ProCount, Ruler, Tiler1.5, Timelogger2.11, Utilities, Wrap, WXModem, Sample It.

Utility Disks

M2: Telecom Disk #1. BinHex 5.0, Free Term 1.8, Kermit, StuffIt 1.0, TermWorks 1.3.

M3: Utilities #1. DES, Font Doubler, MacDump, MiniFinder, PackIt III (V1.3), Reverse Screen 1.0b1, RMover, Scan, Set File, Slicer. Version Reader 1.1, Write Stream.

M5: Disk Librarian. Disk Librarian V1.82A. Includes listing of CN Magic/Spectre Library.

M9: Utilities #2. Bind Icons, Change Appl. Font, Convert Desk Acc, Desk Acc Mover, File Hacker, Font Doubler, Index, Make Screen, MicroFinder, Purge Icons, RamAStart 1.3, REdit, ResEd, Select Paint, Show Version, User Interface Demo.

M11: Print Utilities. Coventry12, Disk Labeler, Fast Eddie, Font Mover, Ink, MacWrite 4.5 to Text, miniWriter, MockWrite, Pica10, ReadMacWrite, Walla Walla9.

M27: Utilities #3. Browse/Shazam!, Clocks: analog & digital, Edit, FEdit 3.0, launch, lazymenu, Magic Beep 1.0, Menu Ed, microFinder, Quick Dir, Quick Print, RamStart2.0+, Road Atlas, ShrinkToFit, SicnEdit, SortMenu, SuperFinder4.0, TabsOut, Unpit, Way Station.

M28: Red Ryder 7.0. Red Ryder 7.0, Red's 7.0 Stuff, RR 7.0 Macros, RR Docs.

M43: Utilities #4. DiskDup+, MacSnoop 1.03, RamDisk+ 1.4, ResTools 2.01, Oasis 2.01, Font Librarian, Switch.

Games

M4: Games #1--Backgammon, Bash Big Blue, Curves, MacLuff, MacYahtezee, Maze 3D, Meltdown, Missile Command, Munch, PepsiCas, Smile, Snow, Solitaire, Space Bubbles, Vax Runner II.

M6: Games #2--Ashes, Black Box, Destroyer, HexPuzzle, Killer Kalah, MacPoly Demo, Office Attack, Point Symmetry, Snake, Solitaire, Trophy List, Wall Game, Wheel.

M7: Games #3. Ashes, Break the Bricks, Deep Ennui, Go, Mac Gunner, MacBugs, MacCommand, MacYahtzee, Wiz Fire 1.1

M15: Games #4. Alice, Amps, Bricks, Canfield 2.0, Iago, Lets Get Tanked!, MacHeads, Nim, Space Attack, Third Dimension.

M20: Games #5. Chase'Em, Crystal Raider, Daleks, Golf MacWay, Kill File, Kill, King, King MacWrite, On-The-Contrary, StuntCopter1.2.

M21: Games #6. Guess, Hacker's Contest, Hot Air Balloon, Match, Ramm, Third Dimension, Trick-Track, Utaan Attack, Zero Gravity.

M25: Games #7. Billiards, Cross Master Demo, Flash Cards, Hangman-9.0, MacLuff, Master Guess, Safari 1.0, Venn.

M30: Games #8. Bowl-A-Rama, MacTrek 1.1, Mystery Box 1.0, Shots, Star Trek Trivia Quiz, Window Blaster 1.0.

M34: Games #9. 1,000 Miles, Asteroids, Cairo ShootOut!, Donkey Doo, Duck Hunt, Pente 1.0.

M45: Games #10. Blackjack 4.0, Gunshy 1.0, Humpback, New Social Climber, Panic, Puzzle 1.0, Star Trek Trivia Quiz, VideoPoker.

M51: Games #11. Bouncing Balls, Fire Zone, Mac Word Hunt 2.0, Out Flank, Risk and Word Search.

M53: Games #12. 3D Checkers 2.0, Bills Casino, BMX-The Racing Game, HeloMath, Mouse Craps.

M58: Games #13. Klondike 3.6, Space Station Pheta, Mac Concentration, Sitting Duck, Hot Air Balloon 2.1, Think Ahead+2.0.

M60: Games #14. Golf Solitaire, Mac Football, Euchre 2.2, Gomoku, Pyramid, Checkers, Runaround and Macpuzzle 1.0.

M19: PCS Games #1. Apple, Black Hole, Face, KalinBall, Madonna, Minute-Mag, Patchwork Mess, Phantom, Pure-Gemme, Samurai, The Royal Pain, Wizards Lair.

M29: PCS Games #2. Circus Circus, D&D, Diadora, Max, Merlin, Modern Mistress, Queston, Royal Pain, Twilight Zone, Whazit.

Adventure Games

M17: Dungeons of Doom 4.0.

M23: Vampire Castle.

M24: Deep Angst. 1 Mb ST only.

M31: Black Wizard.

M36: Castle of Ert.

M40: Hack, V1.03. incl manual w/docs.

M41: Radical Castle.

M63D: Mountain of Mayhem.

M65D: Deep Angst II

M66: Intruder.

Graphics

M10: Graphics #1. Amy, Artisto, Ball demo, Big Ben, Brooke, Bugs, Curves, Display Message, Dragon, Fighting 51, Fourth Dimension, GARF, HotSex!, Liar's Club, Living Art, Max Headroom, Moire 3.0, Nightmare, Optical Illusion, Paint Grabber, Painter's Helper #1, Pattern, Pisces, Rotations, Saddle, The Fourth Docs, ViewPaint 1.5.

M12: MacBillBoard. Chipmunks, Donald & Daisy, Goofy At Bat, Announcement, Babe Ruth, Carrotprint, Classic illusions, Escher, Escher Hands, MacBillBoard, Max, Mickey and Minney, Quick Tour, T-Shirt.

M22: Graphics #2. BlowUp 3.0, BlowUp Notes, Calendar Maker 2.2.1, Dynamo, Graphic, Mad Menus, Math21, Rays, Simutree, Spiro, Tree, Vanlandingham.

M26: Graphics #3. 3D Sketch, AniRama, Bin/Graphics, Brownian Motion, Control, Fractal Contours, Fractals, Icon Collector, Julia, Make Paint, Melting Clock, Small View, Shape Art, Star Flight, Window Demo.

M47: Graphics #4. Cursor Designer, Earthplot3, Graphics2, Mondrian1, MotionMaker2, Moving Finger, Wallpaper, Zoomation.

M57: Graphics #5. Micro Film Rdr1.4, Bomber, Iliana II, Preview, Super Ruler 1.1, and XVT-Draw.

Font Disks**

M13: Fonts #1. Akashi, AlgBlurb, Algebra, Athens, Boxie, Dover, Geneva, Hood River, ImageWriter, LED, London, Los Angeles, Luxor, Mars, Monaco, Park Ave, Pica, Ravenna, Rome, Runes, San Francisco, Seattle, Steel Brush, Ultra Bodoni.

M14: Fonts #2. Bookman, Courier, Coventry, Dali, Genevaa, Hebrew, Manteco, Shadow Box, Sri Lanka, Times, Walla Walla, and font display 4.6 w/docs.

M16: Fonts #3. Alice, Avante Garde, Berkeley, Broadway, Camelot, Cartoon, Centura, Chancery, Eon, Exeter, Fallingwater, Fantaste Key, Fantaste!, Future, Ham, Helvitica, Hollywood, Lachine, Lineal, Madrid, Pittsburg, San Quentin, Silicon Valley, Stencil, Unicol plus DAFont2.da and SysFonts.da.

M32: Fonts #4. Canberra, Chicago, Humanistic, Music, New Dali, Palencia Application, Palo Alto, Pioneer Shadow plus F/DA sorter and Font Tester.

M35: Fonts #5. Beehive, Beverly Hills, Boise, Chicago, Courier, DeStijl, Ham, Happy Canyon, Helvitica, Mod. Chicago, Old English, Square Serrif, Sri Lanka, Worksheet.

M42: Fonts #6. Berlin, Boston II, Courier, Dorza, Highwood, MicroBoston, MiniBoston, New York, Palo Alto, Sparta, Stiletto, Symbol, Tatooine, Venice, Wartburg.

M44: Fonts #7. 42nd Street, Aldous, Art Deco, Ascii, Blockbuster, Border, Clairvaux, Coptic, Deep Box, Ivy League, Klingon, Las Vagas, Little Box, Madrid, Memphis, Minneapolis, Rivendell, Spokane.

M50: Fonts #8. Alderney, Cairo, Cyrillic, Greek, Paint, Playbill, Rehovot, Runes, Washington, Zodiac.

M61: Fonts #9. New Century, Helvetica, Columbia, Minneapolis, Creamy, Palatino, Detroit, and Zap Chancery.

M64: Fonts #10. York, Paint, Miscpix, Icon, Cupertino, Arabic, Fallingwater, Schematic, Moscow, and Isengard.

M67: Fonts #11. Cavanough, Icon2, Fletcher, Math-Greek, Toyland, Troyes, Memphis, Provo, Scan, Tombstone, Southbend, Klingon, Wall Street.

Clip Art**

M33: Clip Art #1--AirCraft, Business, Car Logos, Cars & Trucks, Clip Art Demo, Disney, Eyeballs, Flowers, Misc, Seasons, Trees1, Trees2, ViewPaint 1.5.

M52: Clip Art #2--Al&Jimmy, Americana, Arrows, Bigger Guys, Billboards, Borders, Cars, Cartoons, Cats, Celebrities, Egret, Famous People, Farm Animals, Good Guys, Gorilla, Hopefuls, Little Guys, MacLectic Clip Art, More Little Guys, Presidents, Rain/Chef, Skier/Football, Skylines, Space/Race, Statues, Tennis/Running, Wine & Beer.

M55: Clip Art #3. Animals, arrows, books, business, calendar, computer, disk, files, geography, holiday, houses, icons1-6, mail, memo, misc1, misc2, money, music, office, people and symbols.

Commercial Demos**

M37: Mac-A-Mug Pro Demo. Ver 1.0, Create your own mug shots by combining a variety of different facial features.

M38: Video Works Player #1. PD player for VW animated screens w/11 movies.

M39: Demo Disk #2. Anatomiser, DeskPaint, and SuperPaint.

M54: Design. No save feature. Includes 5 samples and full documentation.

M59D: Demo Disk #3. Demo version of Kaleidagraph and Geographics II.

M62: Demo Disk #4. Math Blaster and Blob Manager Demo.

Hypercard Disks**

M48D: HyperStacks #1. Address, Databook, Fractal, Funy Day, Home Desk, HyperNews1.2, HyperZoetropes, MacGallery, MacVermont #2, Notebook, Periodic Table, and ResEdit IPS. (Requires HyperDA w/64K ROM.)

M49D: HyperStacks #2. Ear, Illusions, Passing Notes, Shipstack, Silly, and US States V2. (Requires HyperDA w/64K ROM.)

M56D: HyperStacks #3. Atkinson's 786K Clip Art Stack (500 clip art pics). Requires HyperDA with 64K ROM Spectre or Magic Sac.

** Spectre 128 compatible.

SPECTRE LIBRARY

These disks are for use with the Spectre Macintosh emulator for the Atari ST/Mega computers. Many will also work with the Macintosh emulator on the Amiga computers. All disks are in Spectre format. Unless otherwise noted, these disks do not work with the Magic Sac Macintosh emulator. Remember, a D following a disk number indicates a double-sided disk. Disks are listed in the order in which they were introduced by Current Notes. NOTE: neither these disks nor the Magic Sac disks can be read by an ST in ST mode. You must be using the Magic Sac or the Spectre to read these disks. Note also that you need a Mac System/Finder disk to use any of the Magic or Spectre disks.

#S1: MacWrite 5.0 Demo---(Cannot print/save but can load and read doc files.)

#S2: MacPaint 2.0 Demo---(Cannot print/save files but can load, view & create them.)

All Magic & Spectre disks are $4.00 each plus $1/(6 disks) for S&H. Order disks from:
CN Library,
122 N. Johnson Rd,
Sterling, VA 22170
(703) 450-4761
Quantity discounts:
10 disks for $35,
30 disks for $100,
50 disks for $150.

#S3D: Red Ryder 9.4---Powerful telecommunications program. Docs, utilities included.

#S4D: Aldus Freehand Demo---A Videoworks II interactive demonstration of Freehand drawing program.

#S5: Games #1---Banzai, Monopoly 4.0, ATC 4.0, Mines, New Daleks, Brickles 4.0

#S6D: Powerpoint Demo---(64K ROMs Compatible) Fully working demo version of this popular Mac program for planning, composing, and creating complete presentations.

#S7: Games #2---Space Bubbles, Stratego, Investigator #1, Towers of Hanoi, Marienbad.

#S8: Image Studio Demo---(Does not save) A photo retouching lab, modify digitized images in 65 grey scale levels.

#S9: Telecom #1---StuffIt 1.51, StuffIt Users Guide, Freeterm 2.0, Freeterm 2.0 Doc, TermWorks 1.3, Packet III v1.3.

#S10D: Stacks #1---Concentration, HyperGunshy, Dinosaurs, AutoStack, Home 1.2.

#S11: Utility #1---MacEnvy, Benchmark, DiskTimer II, SampleIt 1.21, SampleIt Docs, Apfont 3.2, HierDA, Fever, OnCue 1.3 DEmo, ScreenDump II, Findsweel 2.0 Demo

#S12D: Full Impact Demo---Great spreadsheet program. (No save feature.)

#S13D: Stacks #2---VisualStack, Chem Flash Cards, DisplayPict 1.4, Indigo Gets Out, AutCat, Animal Stack, Comic, OnTheBeach, Name That Plane.

#S14: Utility #2---Big Das runner, Mac II Icons, DiskParam, Utilities 1.5.1 Guide, Unstuffit DA 1.5.1, Auto Unstuffit Installer 1.5, Repair 1.2, ICON Designer, Viewer 1.5.1, SuperClock 3.1, SuperClock Doc ToMultiFinder, Interferon 3.1.

#S15: Games #3---Darts, MacCamelot, BricklesPlus, Gravitation 4.0, Swamplord

#S16: DAsS #1---NekoDA, BezierDa and Docs, SnapShotDA 1.2, Adventure, VirusDetective, BreakKey, SysErrTableDA, PinUp Clock DA, Freemem, New Scrapbook DA

#S17: Sounds #1---SoundMaster w/22 sound files for use w/V1.9 of Spectre.

#S18: Graphics #1---1Dmata, DAfx 1.32, 3dEDIT, Fly Saver, Kaleidoscope, Optical, Pattern Blocks, Rae, Turbo View 1.01, MacPaint Shortcuts, Desktop Shortcuts.

#S19D: Hyper Utility #1---Deprotect Stack, XPICT, Moving Cursors Tutorial, Button Manager, Stack Compacter, Field Line Numberer, CardMover, Six Little Goodies, MH PowerScripts Sample, ShowDialog1.5.

#S20D: MacDraw II Demo---VideoWorks format provides tour of latest features.

#S21: Utility #3---File Scan, Jaws Icon, File Master Icon, File Monster Doc, SnapShot Installer, Black Hole 6.0.2, Looney Tunes Icons, Dog Trash Icon, Shredder Icno, UDS/M1.1, Virus RX 1.4a2, System Font. Some icon files require ResEdit for installation.

#S22: Sword of Siegfried---Graphics/text adventure (requires v1.9 of Spectre).

#S23: Sounds #2---Sound files may also be used w/SoundMaster on #S17. (10000 Marbles, Any Sound 1, Any Sound 2, Bad Disk 1, BVad Disk 2, Beep, Beep Sound 1, Disk Sounds 1-4, Don't Worry Be Happy, Ka-Chung!, Rolling Your Own, Type Key 1, Type Return 1, Type Space 1.)

#S24: Games #4---Dragon 2, Zoony, MazerLazer, and demo of ShuffilePuck.

#S25D: MacMoney Demo---Personal finance program, prints but does not save.

#S26: Fkeys #1---23 fkeys and fkey related applications (Analog Clock, Clock, CopyDisk 3.0, Craps, F-KEY Installer, FadeKey, FileInfo, fkey, Fkey File Installer, Fkey-DA Sampler 2, FkeyView 2.5, FullMoon Calender, InfoKey, LaunchKey, MacAlmanac, Pipeline, ResCViewer 4.5, SafeLaunch 2.2, SpaceWarp, StripTease, Unpack, Ver Reader 3.0 and Windows.

#S27: Games #5---3D Checkers V2.0, Ballistics 2.0, Consternation 1.0, HangMan, Peg Puzzle Pak, UnBreakout.

#S28: Database Builder Demo---Fully working demo version of DAtabase Builder, a full-featured database (including graphics) all in a Desk Accessory.

#S29: Sounds #3---Talking Moose 1.21 and 9 sound resources for MacCD (#S23) or SoundMaster (#S17)---Archie, Bad Disk 3, Beep Sound 2, Disk Sound 5, Disk Sound 6, Key Click 1, Oh Yeaaahh!, Mac Sound 1, and Startup Sound 1.

#S30: Utility #4---Init Cdev, Assassin, BundAid, Curse the Finder, Easy Icon, Finder Cursor Icons, Finder Icons, HD Mini-Icon, IconManager 1.1, JerryCan, Murphy Init, NeVR Init, ScrollMBar CDev, System Icons+, Version Sleuth 1.0, What, and Windows.

#S31: DAs #2---Address Book 1.1.2 w/ docs, Artist+ 2.01 w/docs, BlackJack, Calc 3.0, Calendar 1.7, Catch, dCAD 3.0 w/docs, Diskinfo 1.2, Maxwell 2.2a, MegaCalculator, SuperHelp w/docs, VirusDetective 2.2.1 w/ docs, and windows.

#S32: VideoWorks w/Sound---6 VideoWorks animations w/player, sound resources, and MacinTalk (1 Mac to go, Apollo, Marbles, People Wall, ShortStop, and The Cauldron.)

#S33D: HyperUtility #2---13 utilities for use with HypoerCard: GetString XFCN, HyperScrap, LockField, PluckString XFCN, Recover, Script Lister, Script Access, Stack Analyzer, Stak-X Demo, Unity, Virus Encyclopedia, XFCN miscellany, Zoomer XCFN).

#S34: Excel Templates #1---29 assorted files for use with Excel: Macro, Amort, Sch, Apod 1.0, Budget, Checkbook, Clock.CH, Clock.MS, Clock.WS, Commands, DB.Form, Excel Budget, Expenses, Exps, Inc, IRA, Load Calc Master2, Load MaxTime 2, Matrix, MortAmt.MS 3.0, Replace, Savings Account, BioChart, BioRhythm.

#S35D: HyperStacks #3---5 stacks for use with HyperCard of SuperCard: Atoms, Bird Stack II, Helicopter Stack, HyperIRA, Scan Stack 3.

#S36: Sounds #4---contains assorted sounds for use with SoundMaster (CN #S17) and a file that will change the system beep to other kinds of sounds. Includes A Wish, I don't know, I know you are, Mecca jumbi, Need Input!, Unacceptable, Ax Headroom, CheapBeep, Ayaaaah!, Boom!, aooooh, game over man, monkey, and vulcan mind.

#S37D: HyperStacks #4---StackArt Vol. 1 (100 clip art pics).

#S38: Games #6---fully working versions of Cairo Shootout 1.2a, Puzzl 1.1, and Stunt Copter 2.0. These programs were placed in the public domain in memory of their author.

#S39: Utility #5---Init Cdev 2.0, About IOnit Cdev 2.0, Moire Cdev, Moire Screen Saver Docs, Moire Cdev to Init, Hierda .9983, RAM check, SnapJot, SuperClock 3.4, Timepiece, Virus Detective 3.0.1, Wind Chooser 1.0.1, Why 1.0.1, and a fully working, but limited demo version of QuicKeys.

#S40D: HyperUtility #3---four stacks for use with HyperCard: Christopher's XSTAK4, How a Virus Works, IConjurer, and Progress XCMD 1.1.

#S41: Productivity #1---five personal productivity packages: Albun Tracker 2.0.1, Amortize 2.4, Check Book 2.0, Road Atlas, and Smallview 1.3.

#S42: Productivity #2---Address List 1.5.2, BiPlane 1.0.1 (spreadsheet), Doctor 2.35 (makes self launching documents), and Mac Mailing 1.4S (a mail list program).

#S43: VideoWorks w/Sound #2---7 more VideoWorks animation files that include sound. Disk also includes VideoWorks player and Macintalk to produce the sound. Hello Amiga, MacPaint Vid, Movies 3, My1stVid, Trash, Vamp NY 1, and China Doll. Requires V1.0 or higher of Spectre.

#S44: Utility #6---22 utility files and documentation: Black Box 1.5, Com plete Delete, Earth Init, FFDA Sampler, File Fixer, IconWrap Init, Macify 2.5, MacSpeed, Repair 1.4, Rescue, Scrolling Menu Installer, Shredder 6.0, SystemVersion, TextDiff, TFinder 2.2, ToMultifinder 2.3, Vaccine 1.01, and Version Reader 2.2.

#S45: Graphics #2---11 graphics oriented files and documentation: MandelZot 1.4.1, Micro Swarm, Notebook 1.0, NoteNote5, PyreWorks, ScanPaint, SelectPaint, ViewPaint 1.7.

#S46: Everyman 1---A Graphics/text adventure created with WorldBuilder. Requires V1.9 or higher of Spectre.

#S47D/S48D: Phoenix---interactive adventure game based on the movies 2001 and 2010. Requires both disks. Your job is to map previously explored galaxies, but you accidently find the starship, Discovery. It never was destroyed. You must somehow get Discovery back to hearth using HAL. HAL responds to your commands with digitized voice sounds from both movies. Requires Spectre V1.9 or higher and 2 DS drives or Hard disk.

#S49: Lawn Zapper---arcade type game. The object of the game is to mow a lawn while avoiding hazards. This game has digitized sound and is quite addictive. (Requires V1.9 or higher of Spectre.)

#S50: Dungeons of Doom, V5.4---Interactive adventure game based on Dungeons and Dragons.

#S51D: PostScript Fonts #1---11 postscript fonts: Archimedes Border, Bills' Dingbats, Classic Heavy, Classic Italic, Classic Roman, Draftman, Faust, Gordon, Style, Tiny Helvetica, and Toulouse Lautrec.

#S52: PostScript Fonts #2---BarCode39, Cunei, GE Laser, NModern Print Bold, Thomas, Tiffany Sample.

#S53D: Clip Art #1---12 pages of encapsulated postscript clip art in Pagemaker 3.0 format (requires Pagemaker 3.0 or later and Ultrascript).

#S54: Games #7---Beast 1.0, MacBandit 1.2, MacNinja 1.0, Rock Paper Scissors.

#S55: Utility #7---9 of the latest and best utilities: Boomerang 2.0 2/docs, SuperClock 3.8 w/docs, FreshStart INIT, Kick the Can, Layout 1.9, MacEnvy 2.0 w/docs, Timepiece INIT, WatchInit 5.0, WindChooser 1.12 CDEV w/docs.

#S56D: HyperStacks #4---a single 771K HyperCard Stack, entitled Bird Anatomy 1.2d, covers the basic anatomy of birds, flight, feathers, head, wings, ecology and more.

#S57: Utility #8:---Complete Undelete demo, Disinvectant 1.6, FunKey, Speedometer 2.51, SysErrTable DA 2.5.

#S58D: Clip Art #2---66 pieces of scanned image clip art.

#S59: Sounds #5---Beam Up, Dog Do, Life Sentences, Mr. Ed, Soundmaster 1.3.1, SuperPlay 4.0, Zippy 2.0, MacinTalk.

#S60D: PostScript Fonts #3---Calligraphic Sample, Chester, Deuse, Louisville, Rodchenko.

#S61D: HyperStacks #5---Clip Art Sack 3, Crypo-Slate 1.6, Little Black Book, Peridic Table 1.0, Quick Compactor 2.0, SetVersion XCMD 1.0.

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If you are heading south on I-79, then get off at the Heidelberg/Kirwan Heights exit. At the light make a right. Make a left at the next right. Chartiers Valley High School is the first left after you go under I-79.

Here is a complete listing of the CN ST Library. Disks are listed by category. Discontinued disks are not listed. (C) indicates color monitor; (M) indicates monochrome monitor; (C/M) or no listing means both color and mono supported. A 'D' after the disk number indicates a double-sided disk.

GAMES

#21: GAMES #1. (C) Megaroids, Mastermind, Othello, Backgammon, Ripcord, Target, Life, Journey

#37: GAMES #2. (C) BASIC Games (Bomber, Scratch, Switchbox), Celestial Caesers, Ripcord, Score4, Battleship, Blackjack, Mad Libs, Maze Maker, Mylife, Box the Dragon, Mastermind, hints for Sundog.

#39: ARCADE DEMOS. (C) working demos of Joust, Time Bandits (ver .96), and Cracked.

#54: MONO GAMES #1. (M) PuzzlePuzzle, move through labyrinth by completing puzzles.

#62: HACK. Dungeons and dragons like game--descend into the depths of the dungeon in search of the Amulet of Yendor

#80: MONO GAMES #2. (M) Monopool, pool game with 6 balls; Krabat, chess game for beginning to intermediate players.

#100: GAMES #3. (C) Football, Break Out, Missile, four adventure games (Larn, Magnon, Twilight Zone, and Ogre).

#101: GAMES #4. (C) Atartrek, Celestial Caesars (new ver.), Krabit (chess), Twixt, ST Aggrevation.

#112: GAMES #5. (C) Checkers with 6 skill levels; Slot Machine; Warzone; Daleks; Dragon, Nightcrawlers, 5-card stud poker; Breakout; and Yahtzee.

#122: GAMES #6. (C) Monopoly, Haunted House, Backgammon.

#135: SHANGHAI DEMO. (C/M). Match pieces to solve puzzle. Full implementaton for single puzzle.

#139: MONO GAMES #3 larn2, ogre, atari-trek, maze maker, checkers, battleship, window ball.

#140: GAMES #7 (C) Tripple Yahtzee, Wheel of Fortune, Pente, Sensori, Spacewar.

#141: GAMES #8 (C) Azarian and DGDB.

#153: EAMON ADVENTURE GAMES (C/M) Eamon Beginner's Cave; Devil's Tomb, Eamon Death Star, Holy Grail, 1st Eamon game; ver 2.0 of main hall.

#178: BREACH SCENARIOS. 16 Breach scenarios ranging from easy to the star level.

#179: GAMES #9: KID FUN #1. (C) Kid Notes; Barnyard; Kid Sketch; Doodle, and Deluxe Piano Player.

#186: MONOPOLY (C). GFA Basic source code to this popular board game.

#187: WHEEL OF FORTUNE, V2. (C) Includes 26 puzzle files (beatles, child, clothes, computer, fauna, film Lit, Flora, Fun, Old Test. Bible, Software, Shield, Titles, US Air, Vacation, Yum-Yum).

#188: MEAN 18 COURSES #1* (C) Cauldron, Peter Pan, Prince 18, Devil Driver, Forest 18, Hell Hole,) Agony 18, Fireline, Watery 18. (* All courses ARCd, combines courses from original #188, #189 and #190.)

#207: STATISTICALLY ACCURATE BASEBALL. no graphics. shareware game includes data for 4 teams: ('62 Giants, '70 Reds, '84 Cubs, and '86 Mets) *Not for Mega.*

#208: GAMES #10. (C) Milborne, G-Ranger, NIM, Trucker, Darts.

#209: GAMES #11. (C) Poker, Black Jack, Roulette, and Slots.

#210: GAMES #12. (C) Two versions of Pacman, create your own jigsaw puzzles from Degas pics, drive race car around track and create your own tracks with Degas, prg to make you invincible in Time Bandit.

#211: GAMES #13: KID FUN #2. (C) Kid Music, Kid Piano, Kid-Potato, and Kid Mixup.

#212: MONO GAMES #4. (M) Spacewar, Megaroids, Runner, and Squixx.

#213: MONO GAMES #5. (M) Adventure writing system, Daleks, Krabat2 (chess), Stocks and Bonds, Eliminator, 2 desk accessory games (breakout and reversi).

#225: BREACH & EMPIRE. 14 scenarios for use with Breach. Collection of maps for Empire players.

#230: MONO GAMES #6. (M) Cribbage, Draw Poker, Mega Maze 1.1.

#240: GAMES #14. (C/M) Bog V1.2 (Boggle clone w/dictionary), Core Wars (knowledge of assembly lang recommended), Escape (good adventure-type maze).

#257: BASEBALL. Play baseball! Includes programs to create your own teams and evaluate the statistics.

#261D: STARTREK. (C) The Next Generation. command your own battle cruiser in this space-age simulation (1 Mb & DS drive).

#269: MONO GAMES #7. (M) Anduril, Ballerburg, Diamond Miner, Invaders, and The Snafu Principle. (Includes monochrome emulator prg so mono programs can run on color monitor.)

#273: GAMES #15. (C) Hacman, Jumpman, and Escape adventure game.

#274: GAMES #16. (C) Midway Battles (wargame) and Hero! V1.0 (adventure game).

#275: AIR WARRIOR, V1.2E. Flight simulator for private practice or multi-player aerial combat simulation on GEnie.

#282: DAMONOID. (C) Arcade game. *No Mega.*

#283: ADVENTURE GAMES. System 5, Once A King, El Bozo's City Out of Bounds.

#293: DUNGEON MASTER MAPS. Maps and a cut'n'paste spell chart to aid you in your quest in Dungeon Master.

#294: KID GAMES #3 (C) Kid Publish and Kid Shapes.

#296: STACATTO. Musical quiz game.

297: AMAZE. Maze Construction Set. Draw an image boundary and then solve on screen or print out your maze.

#304: ELECTRONIC JIGSAW PUZZLE. (C) Puzzle program for Neo, Degas, and Tiny pictures. Includes 14 pictures for 25, 64, or 100 piece puzzles.

#313: ZOLTAR (C) Similar to Galaxian but gives you the opportunity of defining your own alien ships and their flight patterns.

#314: BULLET TRAIN. (C) Arcade game: pilot your train, avoid pursuing train while watching out for dead-end tracks and box cars blocking your way. Requires 1Mb, *No Mega.*

#316D: CASINO-KENO (C) V1.0 faithfully simulates keno games in Nevada.

#326: GAMES #17. (C) Battleship, Clowns, Fun Laws, and Invaders.

#339: EXTENSOR. (C/M) Game based on light cycle sequence in the movie TRON.

#348: GAMES #18. (C) Companion 1, (fly your ROCM), Trivia Quiz.

#356: BOLO. (C/M) Arcade game, cross between Breakout and Arkanoids.

#359. PENTIMO. (M) Terrific puzzle game, try placing these 12 pieces in a box!

#360: BERMUDA RACE II. (C/M) Sailing race simulation game.

#361: GAMES #19. (C) Rocket Patrol (like Missile Command) and Trifide (like Galaxian).

#362: A DUDLEY DILEMMA. (C/M) You are Harvard U. student living in Dudley house in a quest for knowledge, adventure and a diploma.

#363: TARK. (C/M) Priestess of the first church in her battle against the demon of dark desire. Dungeons and Dragons theme.

#364: RAPTURE and SUSAN (R). (C/M) Love's Fiery Rapture and Susan, A Lustful Game (adults only).

#365: RING & PORK. (C/M) Des Ring Des Nibelungen and Pork, a paradoy of the Infogame Zork.

#366: ADVENTURE GAME TOOLKIT. (C/M) Shareware product lets you construct your own adventure games.

#367: AGT SOURCE CODE. Source code to 9 AGT adventures: Colossal Cave Adventure, Crusade, Elf's Adventure, A Fable, Ghost Town, Paranoia, Odieu's Quest, The Squynchia Adventure, An Underground Adventure.

#373: STRIP BREAKOUT (R). (C) Breakout game. Remove bricks to expose picture. 27 screens (adults only).

#387: EMPIRE MAP COLLECTION. A collection of 120 maps for Empire. Requires the game Empire from Interstel to be useful.

#388: BREACH SCENARIOS. A collection of Breach scenarios, Breach Cheat 2, and a squad leader editor.

#389: GAMES #20: (C) **Star Trek.** STOS variation of the Star Trek game. No TOS 1.4!

#390D: GAMES #21: (C) **Pile-Up.** A STOS variation of the Russian game of Tetris. DS, No TOS 1.4.

#391: GAMES #22: (C) **Super Breakout.** nice variation of Breakout w/editor.

#419: GAMES #23: (C) Blaster, Invaders, and ST-Tetris.

#421: MONO GAMES #8. (M) ST Tetris for the ST; Draw Poker, V2.5; Dragon; MacPan V1.0; Sokoban.

#426: MEAN 18 COURSES. (C) 11 new courses: Stumpy Lake, Oval Creek, Bow Creek, Oceana, Red Wing, Castle, Lee Park, Kapula, Lunar Link, Short Course (best short holes in USA), and Greatest (18 in US).

#428: GAMES #24. (C) **Eco**, a fascinating ecology simulation/animation; **Orbit**, breakout game, works w/TOS 1.4 and replaces #315.

#429: GAMES #25. (C) Alien Blockade, a QIX clone that will keep you occupied for a long time!. Atom Smasher, another break-out type game.

UTILITIES

#18: UTILITY #1. anaclock, breakout, deskcalc, digclock, puzzle, ram, ramacc, bicalc2, calc, calca2, noverify, dblboot, copydisk, sectedit, squeeze, unsqueeze, format, mushro, stdio, title.bas, dump, labels, print, spool, printdir, degcol, effects, neocon, omaker, smaker, slide, windows, timeda, and calc.

#25: DEGAS UTILITY. 24 fonts (archaic, gramma, stencil, graph, classical, kung fu, thinte, graphics, cursive, olde, woodcut, normal, daisyw, oldeng, ascii, system, double, rally, computer); 12 printer drivers (cgp220, ct1300, epson3, jx80c, mini193, ml93, necp3b, necp3c, ok120c, pj1080); prgs to convert Degas to Neo and Koalapad to Degas.

#30: UTILITY #2. Assembler; cpp22; rcv2 and dcopy; Forth-83; printdir and timedate; Labels; Pallet; Picswitch; Squnsq; Volume.

#36: DESK ACCESSORIES. TI-59 calc, calendar, digi clocks, ramdisks, free ram, screen snapshot, background colors, sector ed, games, ST Tips.

#61: PRINTER DRIVERS. First Word(ascii, bro10p, bro12pt, bro15pt, brohr15, epfx80, esfx80, epsix80, lq800, oki02, oki192, pan109, prortr, pr1215, 1stnx10), Degas (panson, cgp220, cti300, epson3, jx80c, ml193, ml84, ml93, necp3b, necp3c, oki20b, oki20c, pj1080, prowtr, sg10). Star and Gemini fonts (computer, cut, french1, olde, outline, russ1, smooth, stylish). spool33k.prg; prtspool.ttp.

#63: UTILITY #3. Word400 editor desk acc, floppy disk indexer, file squeezer & unsqeezer, pic conv & comp utilities (dega2colr, dega2neo, doadeg, neo2dega, tinyview, tinystuff, tiny docs, picsw6.prg), ramdisk copy prg (ultcopy), library prgs (backup.ttp, contents.prg, frmtutil.prg, fdi.tos), timedate.acc, spool33k, sector editor.

#72: UTILITY #4. Format & copy 400K and

800K; library & delibrar; make512 & make1meg; Fn Key Labels; muscnvrt; desk Acc(cli, fastram, fortune, prints, deskman); fileprint; proff; print hi-res on color system.

#73: UTILITY #5. archiver; Copy files to ramdisk; ramdisk acc; disk lib prgs; disk speed checker; encrypt; title page printer; V2 of desk acc wp; convert Megamax H files to Personal Pascal I files; calc prg.

#81: UTILITY #6. V3 of word400; address book prg; change drive icons to diskettes; directory lister; quick I/O formatter; fast ramdisk; Font Ed; disk dir lister; hard disk backup; fix xmodem downloads; search disk dir; send setup cmds to Epson printers; test RAM.

#94: UTILITY #7. Make clipboard acc, analyze dBMAN command files, print out strips of picture files, banner, marque, blast (fast display of Pix & Neo files), Mac to Atari, Picdex, tiny prints.

#95: UTILITY #8. formatter (allows 9/10 sectors/track, 80-82 sectors/disk side, fast or normal read; convert Dega fonts to Degas Elite; elec schematics for use with Easy Draw.

#102: UTILITY #9. Early version of Apple II emulator, bulk erase, disk dir. printer, disassemble, ramdisks (eternal, yard), disk format acc., ram disk loader, disk labels printing program, monitor st (debugging tool).

#107: ST RAM DISKS. 25 Ramdisks, 7 Auto Loaders (fdcopier, intramdk, loadram, eternal, yard, ultcopy, fastramd, autoramd,mike5, ...)

#113: UTILITY #10. TURTLE, hard disk backup; PROGCALC, programmable calculator; UNDELETER; FORMAT3; VIDCOL.PRG, convert DEGAS Elite files to ASCII simulations of Vidtex for viewing by Flash.

#117: ST DESK ACC #2. Acc load, eternal, format acc, index, kalklock, mobzdil2, new word, startup1.1

#121: UTILITY #11. address book, text browser, arxx, format.gem, gem font editor, font loading acc, start1.1

#126: PUB PARTNER UTILITIES. Helvetic and Normal fonts with 18 various printer drivers including Epson, Gemini, Bluechip, Okidata, T321F, SB10F, LQ800F, SMM804, C8510A.

#127: ST FONT EDITORS/LOADERS. Font Loader (High-res only), Gem Font Editor, Ver 1.11, and FED Font Editor.

#131: UTILITY #12. Programmer's Utility disk: uudecode, uuencode, bucket, kill, scach, make, setinit, verify, volume, 1_filepr, case, mase, ...)

#132: UTILITY #13. Disk library program (Diskcat), two text editors (less & vix), disk copy programs (autodisk, dcopy), startgem, access, rocp.

#144: UTILITY #14. Alarm clock acc, C shell, buffer setup prrg., coldboot.tos, display any res DEGAS on any res monitor, script for DEGAS slide show, harddisk auto boot, multiple file printer, mouse ed., spelling checker, rambuffr.acc

#145: UTILITY #15. ASL (print out multiple documents), GULAM (command line interpreter), HDSCAN (selectively backup hard disk), LABELS (disk label prg), STARTGEM (start GEM prgs from AUTO),...

#154: UTILITY #16. MODULA-2 Utilities: context2 Modula-2 editor; m2print ("pretty print" program);makefile utility; qcopy (source for disk copier prg); and m2proc (displays procedures).

#155: UTILITY #17. dcopy20; diskfix; megablit drawing prg; most (view text files); qcopy; quiklbl2 (quick disk labels); ymodem batch accessory.

#162: HARD DISK UTILITIES. Directory count (gets around 40 folder limit); C source to HD directory; supra ver 2.61 utilities; turtle HD backup ver 2.15; add multiple HD to supra.)

#166: UTILITY #18. disk editor, musical formatter (gercopy), multiple formats (xutility), modify seek rates for 5 1/4" drives.

#185: UTILITY #19. Analyze copy protection (diskmech), format disks for Magic Sac, IBM, ST normal & fast read, normal or extended format (dc formatter 2.2), ST maintenance programs (arundisc, brundisc, dspeed, memst1, priveye), superboot V2.

#206: UTILITY #20. Set screen/text colors on bootup & save in separate desktop.inf files for each resolution (Bootup V2.05), Epson font editor; calculator and limited screen plotter in one; fast disk copier; graphic utilities: convert IFF files to compressed Spectrum; show Spectrum, Degas, and Neo pics, convert AIM to Degas & Degas to AIM.

#220: UTILITY #21: Your 1st Utility Disk. (compiled by J.Andrzej Wrotniak) Micro-Time Alarm Clock, ST Ramdisk and Printer BUffer, Clock/Calendar, ASCII Printout, DeARChiver, Disk Manager, Disk Directory Listing Prg, and Acc Selector and Resolution setter.

#221: UTILITY #22. Arcshell V1.8, ARC Acc, dcformat acc, diskfree(speeds up--10 fold--gemdos diskfree() function), foldrxxx (takes care of 40 folder limit in TOS), fselv55 (replacement for GEM file selector box), super boot V3.2 (all-in-one type boot program).

#222: DESK PAK PLUS. (Shareware) 10 desk acc in a single file: clock, calendar, phone book, calculator, appointments, free ram, note pad, copy file, delete file, desktop.

#229: EASY DRAW UTILITY DISK. Fonts: (Chicago 7-36, Courier 7-36, Calig 7-36), Easy Draw Art (18 GEM pics: assissi, box_brd, callig, clip-tmp, dailycal, disk_lbl2, hi-tech, line-brd, pd-art-1, pd-art-2, rocky, scrolbrd, swiss, vhs-lbl).

#234: UTILITY #23. ST Floppy Disk Manager V1.0/2.0 (dskscan1), deluxe slideshow V2.0 (dslide2), (Atari ST File System checker and repairer, V1.1 and File System Compacter (hdoptimz), Virus killer prg (penicilin), (Super Directory data file reader (sddfr12).

#238: PUB PARTNER UTILITY #2. New PP fonts (cyrillic, helvetic, hudson, and saturn). Printer drivers (hpd, hpf, lq1000f, necp7d, necp7f, and ps-plus). Font editor (w/docs) for creating your own PP fonts.

#242: UTILITY #24. ARC Shell II, V1.91, Desk Manager V2.1 allows greater control on system bootup. Ledbetter Utiities (collection of 4 utilities), Manager prg for those that use Tempus ed with TDI Modula-2 (m2grv2), Powerful ed of VT52 graphics (vt pro), Redirect Alt-Help key so screen is saved in Degas format instead of sent to printer (degasave).

#253: UTILITY #25. V6 of item selector (fselv60), disk formatter (cssformt), TOS patch to speed up hard disk writes, backup protected disks, new intersect ramdisk, check disks for viruses, translate IBM Wordstar to First Word.

#254: UTILITY #26: Graphic Utilities. Various conversion prgs (Spectrum to Degas to Neo, etc), display all 3 Degas on color or mono, save screen as Degas pic, Degas fonts to GDOS, Pic Switch V7, stuff/unstuff Tiny pics, display GIF format files.

#255: UTILITY #27: Arc & Arc Shell. Version 5.21 of arc.ttp and share program ArcShell II (Ver 1.95 & 1.96). Includes all C source code to IBM version of ARC.

#260: YOUR 2ND UTILITY DISK. by J.A. Wrotniak: Address Book (acc and prg) and Zap-Card (simple data base program.

#276: DISK CATALOGER AND LABEL PRINTER. Compiled dBMAN program. Shareware by Saraware).

#279: ATARI SLM804 LASER DISK. Diablo Emulator 1.2, GDOS Boot 1.2, LCamelot font for Laser.

#284: DESK ACCESSORIES #3. Mouse doubler, mouse editor, address book, Double-click software's Clock, Formatter, Stuffer.

#320: PRINT MASTER #1. Includes Borders 6,7,8, and 10 for PM and PM+ and a folder of PM_ART icons. Utilities allow conversion of PM to Degas and back. PM cataloger program to view/print alphabetized list of any PM files.

#323 DATA BASE UTILITY DISK. CD Base (Compact Disc database); Diskette Management Utility (catalog disks into library.)

#324: UTILITY #28: ArcIt Shell V1.04 (arc a whole disk of files), WhatIS V1.2 (Identifies 27 different kinds of files); Quick Inf (load and save Desktop.INF files, edit window and icon information); ABZShell (command shell- 19 commands).

#340: DISK LABEL PROGRAMS. Over a dozen label maker programs for every type of label you might need.

#341: PRINT MASTER UTILITIES. Save PM icons in Degas format, convert Print Shop icon data file to PM icon library, several collections of borders for use with PM.

#343: UTILITY #29. Dissassembler, dcopy ver 312, mystic (acc to do background formatting), mouse accelerator, rate speed of your hard disk, convert GIF files to NEO, RAMBABY ramdisk & print spooler, headst10.

#344: UTILITY #30. load your acc from folder, acc version of dc formatter, dcfrm ver 3.01 (format disks for TOS, MS-DOS, and Magic Sac), Quick Utility for reformating disks without losing data, Quick Menu 2.0a, Quick Find 1.0 (search for a file on your hard disk), Quick Menu, QuickST 0.81 (text output accelerator), QINDEX (benchmark your ST), scrnsave.prg (blank out monitor after period of inactivity; SuperBoot V5.5,

#346: SPECTRUM 512 UTILITIES. (C) print Spectrum pics directly to printer, convert Spectrum 512 pics to Degas PI1, GFA Basic prg to view Spectrum 512 pics.

#351: PUB. PARTNER UTILITIES #3. 18 Publishing Partner fonts: Binner, Blockup, Cyrillic, Futura Bold Cond., Futura Block, Keyboard, Gothic, Lubalin, Old English, Oriental, Segment, Spokane, Stop, Timebold, Tyme/Helv, University, and Wilkes.

#352: GRAPHIC UTILITIES. Metaview Prg/Acc (view GEM pics in GEM windows). Image Editor DA-edit IMG files (mono). Deluxe Slideshow V2.0. IMG Show (view IMG files on any monitor). Art Gallery. ST Banner. Degasnap.prg and snapshot.acc.

#353: PRINT MASTER ICONS #3. Collect 1,2,3,4--479 PM icons.

#354: PRINT MASTER ICONS #4. Collect 5,6,7--470 PM icons.

#357: PAGESTREAM FONTS #1. assortment of DEMO fonts (do not include entire alphabet) Anglo, Opt, Typewriter, Downtown, Handwriting, Rock, Beginnings, Brushup, Karin,... +24 more fonts.

#358: CALAMUS FONTS #1. 15 complete fonts for use with Calamus (Chancery, Cursive, Cond. Cursive, Gaudy, Gaudy Cond., Gillia, Revue, Souvenir Med, Souvenir Med Italics, Spokane, Study, Windy)

#374: CODEHEAD UTILITIES. Little Green File Selector V1.4, Pinhead V1.3, plus three demos from Codehead.

#375: DAREK MIHOCKA UTILITIES. Complete collection of Darek's Quick utilities (Quick ST, Quick Index, Megablit paint program and Megawatt acc.

#376: NEODESK ICONS. 31 icon files for use with NeoDesk 2.0. Includes NeoDesk demo program. ARCd.

#377: OFFICIAL ATARI UTILITIES. Atari's Hard Disk utilities and booter (V3.01). Complete set of Rainbow TOS utilities and patches. Hard Disk Ship acc. Mouse Accelerator II.

#379: UTILITY #31. Dcopy 3.2A, Diskvfy (verifies disk), floormt2 (formatting program runs in low res), gemlabel (V3 of GEM-based labeling prg), ack2prg (shrinks sizes of executable programs).

#385: DC SHAREWARE SAMPLER. Double Click (DC) Formatter 3.02; Mystic Formatter 1.0; DC Xtract-extract prgs from ARC files; DC Clock V3.3; DC Deskey V1.0--a desktop menu selector using keystrokes; DC Stuffer V0.9-load in up to 32 DAs into GEM.

#403: UTILITY #32. (C) Cheetahc, copy multiple files; Gemred, redirects output to printer or file. Adbase14, address database; Dskchart, display chart of disk usage; Ffind12, disk library program; Speedrdr, improve your speed reading.

#404: UTILITY #33. (M) Pubpaint, PD paint program; Cheetahc, copy multiple files. Gemred, redirects output to printer or file; Speedrdr, improve your speed reading.

#405: DESKJET UTILITIES. address2, compact, deskjet.cfg, djetboot, djdegas, dvi_dj, epsjet, fs_djet, hpdskjet, jetlab11. jetset, laserjet, p_or_sav, shtpdj, shtpdjp, stw_hpdj. testfonts (Candyland and Camelot).

#406: UTILITY #34. (C/M) Assassin, simplify modification of GDOS ASSIGN.SYS files; boostv09, select programs and desktop.inf files at bootup; desk manager v2.7, GEM interface to select bootup options.

#412: ARC & LHARC. File Compression Utiities: ARC 6.01, ARCSHELL 2.1, LHARC 51, and ARCLZH.

#413: UTILITY #35. Check 1a, cheetah2, trashcan (Neodesk utility), diary 1.7 (DA editor).

#414: UTILITY #36. DC Showit, replacement for GEM show routine; starstrk, screen saver; Igselect16B, little green item selector; superboot V6.0; switch630, shut Diablo emulator on/off.

#423: UTILITY #37. Graphics utilities. SPX Slide show (shows PI1, PI2, SPC, SPU, and NEO formats_; IFFCNV (converts NEO, PI?, TN?, IFF, and SP? formats to NEO, PI? or IFF); SPECDEG (converts SPU to PI1). CVTPM (converts IBM PM library and borders to ST PM format); IDEALIMG (Ideal IMG sizer will set header info of IMG file to the right size for your printer); PI3_2MAC (converts Degas to MacPaint); PM_TO_PS (transfer PM graphics to Degas hi-res format); PRT_IMG (print IMG files to Star NX-10, or compatible, printer); B-GIF (convert GIF to PI1, PI2, or SPU).

TERMINAL PROGRAMS

#300: DUAL TERM. Telecommunications program by Tony Belding. Text capture or upload, xmodem, automatic dialing and display of both VT52 and ATASCII graphics.

#325: STARNET BBS V1.24. Bulletin Board System includes xmodem and supports word wrap and a 'doors' system.

#347: MOTERM ELITE 1.41. Ultimate telecom package for the ST features med or high res graphics, sound transferred online, Dmodem, built in text editor, automatic dialer, fastest xmodem available.

#381: VANTERM V3.8! Full-featured terminal program for the Atari ST (c) 1987 by Wm. A. Van Nest, Sr. Disk also includes **DCOPY32.PRG**.

#422: UNITERM, V2.0E. Truly outstanding piece of freeware for those who need powerful terminal (VT-xxx, Tektronix, or IBM) emulation capabilities. Has the best Kermit implementation available for the ST. Includes complete documentation file.

LANGUAGE: GFA Basic

#130: GFA BASIC PRGS #1. GFA Run only version, terminal prg., sprite ed., torpedo game, fractals, archshell, format2, drawing prg., graphics demos:fx, display, gfa_cube.

#168: GFA BASIC PRGS #2. Source to stone deluxe, ship combat, and recalbdb V2 (record album db incl. source and runtime prg).

#169: GFA BASIC HELP. Seven tutorial and tip files on using GFA BASIC by John B. Holden, graphics tutorial, plus med rez galloping horse.

#170: GFA BASIC PRGS #3. diox V0.95 (easy user interface for simplifying construction of dialog boxes in GFA Basic, outputs GFA source file.)

#186: GFA BASIC MONOPOLY. (C) Includes GFA Basic source code.

#191: GFA BASIC #4. GFA "tip" files 8-11. Paing program, 3D Tic-Tac-Toe (mono); variable cross reference, line numbering.

#400: GFA TUTORIAL. NOT a tutorial for those of you already familiar with GFA Basic. Just a plain and simple guide from square one for learning the use of GFA.

LANGUAGE: C

#8: C PRGS #1. 17 C programs with source code.

#33: C PRGS #2. cc, digit, fixed, debug, qio, pi3con, printdir, ramfree, sound, ttool, vdisamp, windtst, and more.

#82: C PRGS #3. 3d, artwork, arxx, cc, clock, fractal, li, palette, print, qix, startup, ttool2, qio

#123: SHAREWARE C COMPILER. By Mark A. Johnson. Includes C compiler, PD Ramdisk(s), PD command line interpreter, MicroEMACS text editor and bootup utility.

#133: C PRGS #4. Source to code uudecode & uuencode, kermit.acc, citadel BBS & utilities, and VC_clone (spreadsheet program).

#156: C PRGS #5 (source for file selector box, two make utilities, source for QT term prg, term prg that supports xmodem, ymodem, and zmodem.)

#171: C PRGS #6. bmodem *(terminal emulator), sealink (transfer protocol), sed, ctag (two unix-type utilities).

#223: C PRGS #7. C source for ARC.TTP, a C compiler,formatting disks at 11 sectors/track, disk formatting program, code for accessing TNY file formats, and a cross assembler to 6809 CPU-based systems.

#231: C PRGS #8. HACKSORC--source to the game HACK. PENICILN--contains source to an ACC to help protect against computer virus as well as the ACC itself.

#277D: GNU C Complier (C) 1988 by Free Software Foundation Inc.

#288, #289, #290, #291: GNU C SOURCE CODE. Four disk set includes Make and Other Utilities, Assembler, Compiler, header files, DIFF source and a collection of documentation.

#298: C PRGS #9. source to ST Xformer V1 and V2 (The Atari XE Basic emulator).

LANGUAGE: Elan

#378: ELAN 1.5. Another nice programming language environment from the Neatherlands with sample source code and docs in TEX format.

LANGUAGE: Forth

#53: ATARI ST FORTH-83 MODEL. Written by Laxen & Perry, includes FORTH language, editor, assembler, decompiler and Atari xbios functions.

#71: FORTHMACS WORKING DISK Ver. 1.1. (c) 1986 by Bradley Forthware, Forthmacs is one of the very best Forth systems available today.

LANGUAGE: GEM

#148: GEM TUTORIALS, Columns 1-10 (windows, dialog handler, resource files, rsc tree structure, raster operations, menus, user interfaces, VDI graphics)

#149: GEM TUTORIALS, Columns 11-17 (GEM hooks, GEM events, form manager, user interfaces-2, coping with GEMDOS, interface potpourri #1, PC/ST Rsc converter)

LANGUAGE: Modula 2

#83: MODULA-2 PRGS #1. Shell for ARC.TTP w/source; files for line A calls; patches to V2 of Modula 2; cmd line interface; list dir; format disk; display free RAM; Huffman compression algorithmn.

#92: MODULA-2 PRGS #2. Includes ST Speech Modules and other enhancements to Modula-2.

#110: MODULA-2 PRGS #3. Complete set of Modula-2 source code from the BBS of The Journal of Pascal, Ada & Modula-2; Samples of building library modules using AES calls; Source to access Russ Wetmore's Clipboard routines; String Library routines and more.

#232: MODULA-2 PRGS #4. GEMMODUL--very useful and large assortment of modules to ease the use of GEM functions. MATHTRAP--collection of modules for adding more math functions. THEACC--ACC that gives 2 formatting formats, numerous copying options and disk DOS type commands all in one acc.

#305, #306: MODULA2 LANGUAGE. 2-disk set contains full working implementation of Modula2 language (note: Manual not included but can be obtained from author.)

LANGUAGE: Pascal

#49: PASCAL PRGS #1. 46 files including 34 different PASCAL routines and docs from OSS BBS.

#93: PASCAL PRGS #2. Includes latest from OSS BBS plus source for CHECKERS, a spelling checker, more...

#111: PASCAL PRGS #3. Complete source to ATARTREK (Star Trek for the ST); Complete source to CHECKERS; Sample routines to format adisk from the OSS BBS; Sample routines to read in a DEGAS picture file; GEMDOS calls from Pascal and more.

#177: PASCAL PRGS #4. Handle special keys (getkey); statistical analysis (pas stat); get BIOS parameter block (getbpb); displbay all filenames (fulldir); dealwith complex numbers (complex).

#299: PASCAL DISK #5. Disk labeling program and referencing pixels on the screen.

LANGUAGE: Prolog

#224: TOY PROLOG. This language operates exactly like the system described in Programming in Prolog by Clockrin & Mellish. (Note: complete docs BUT they are in German!).

LANGUAGE: Icon

#124: ATARI ST ICON LANGUAGE, V6.3. This ICON language (a follow-on to SNOBOL4) from the Univ. of Arizona was implemented by O. Rick Fonorrow and Jerry D. Nowlin.

LANGUAGE: Smalltalk

#262D: LITTLE SMALLTALK, Ver 2.0. Object-oriented language. Includes C source code. Requires DS disk.

LANGUAGE: Xformer

#263: ST XFORMER, Ver 2.41. Atari XL/XE emulator. Atari 8-bit Basic included. Run your 8-bit programs on an ST. Requires 1Mb, (C/M).

#264: XFORMER UTILITY. Disk for use with the XFORMER 8-bit emulator. Contains DS 8-bit disk w/patched ATARI DOS to provide double density DOS for use with XFORMER. Includes TURBO BASIC,.

#349: XFORMER PROGRAMS #1. Includes Analog 35, 38, 41, 44, 8-bit disks converted to ST format for use with XFORMER.

#350: XFORMER PROGRAMS #2. Includes Analog 47, 50, and 55 converted to ST format for use with XFORMER 8-bit emulator.

LANGUAGE: Xlisp

#181: XLISP 2.0. Latest version (w/language called VPS5). Docs from Ver 1.7 included).

PICTURE DISKS

#40: TINY COLOR #1. (C) bee, comet, commie, dire, explorer, fractal, insect, map34, racecar, rockets, sailboat, sghost, snake, spiral, supman, train, troubl, trumpwet, weather, yamato

#41: TINY COLOR #2. (C) 520st, aftburnr, amigabla, atari, corvette, courgar4, countach, ferrari, ghostbus, hitchhik, horses, kingtut,

klingnon, loudness, miamice, oldmovie, porsche, portrait, rio, startrek, starwars, stoneage, threed, timewars, uranus, waace.

#42: TINY COLOR #3. (C) at130xe, at400, at600xl, at800, at800xl, atari, bird, bull, demon, fish, goalie, hendrix, maxell, moon, moon2, mrx, parrot, parts, planets, saturn, shuttle, shuttle2, sun, winter.

#48: TINY MONO #1. (M) apple, beagle, brooke, bunny, cad3d, chess1, chrsti, cowboy, hunger, jdxmas, morgan, nature, persian, polarbar, takeon, wetlime, xmascy.

#51: TINY COLOR #4. (C) alarm, at810, back, bobevans, brooke, dec, diner, drwho-box, enterpri, escher, fader, flight, floppy, galileo, halley, k9, maxell, morgan, motherst, mttam, newscast, relheat, robot, robottv, romulan, scicover, shut747, st1042, top.

#52: TINY COLOR #5. (C) 3dview, aafall, aaflag, aainsect, airport2, alien, boy, bugsbull, bullseye, chaos, chrome, faucet, fonts, girl, girl2, house, jokey, map43i, scicover, startrek, uranus.

#65: TINY COLOR #6. (C) altmap, at1200xl, bat, bugs, coyote, dragon3, dungeon, gibson, girl3, marie2, mariel, miamivic, mickey2, mugs, scully, skate, sunset, toyotvan, vanhalen, warriors, wizard, xevious, tinystuf/tinyview.

#75: TINY COLOR #7. (C) Pics from PRINTECHNIK demo disk: capital, car, carddame, cardking, ct-mag, eifel, fl-pferd, girl6, girl8, gohorse, jacksig, moonastr, pferde, schadma, tina, train PLUS tiny prgs.

#96: TINY COLOR #8. (C) bigcats(6-9), davenoe, donald1, eagle, eagle1, elf1, fruit, gorilla, headroom, marilyn, mars, mona-ami, pluto, ronald, tinyview/tinystuf.

#108: TINYPICS #1. (C) **GHOST BUSTERS** (cabbie, danak, danblast, demon2, demon4, gostmbl, marshm2, sigg2y2, sigourne, staypuf2, vincel2, weenie); **RAIDERS** (leathomp, lighteye, ouch, spike, wellofsl); TNYVIEW3.PRG, TNYSTUF2.PRG.

#109: TINYPICS #2. (C) **EMPIRE STIKES** (ata1, darth, falcoln2, falcon, hansolo, stardes2, tiefigh2, xwing, yoda); **SHUTTLE** (astronau, blastoff, ground, landing, landing2, piggybac, spaceman, spmanclr, tower, treads); TNYVIEW3.PRG, TNYSTUF2.PRG.

#118: TINYPICS #3. SCI-FI (C) (alien, cybermen, darkness, davros, depspace, drwho, lo, judith2, kingon, mornstar, pike, pinets, romulin, saavik, saturn, shipfire, shuttle1...)

#119: TINYPICS #4. TRANSPORT (C) (autodesi, bicycle, boat, cnvrtabl, colorcar, corvette, cycle4, express, f14tomct, f15, f15strk, ferrari, mazda, model, ninja, por911,...)

#120: TINYPICS #5. CARTOONS #1 (C) (birds, bugs, bully, circus, coyote, daffy, ddcar, disney, disnmick, duckdodg, flightc1, malefcnt, martian, mickey, pengy, roadrnnr, snowwhite...)

#137: TINYPICS #6. CARTOONS #2 (C) (banana, beetle bill, bilnopus, buzzybe2, capnopus, dungeon, ewoks, flower, garfield, gumby, hagar, heman, malthar, odie, pebbles,...)

#138: TINYPICS #7. ANIMALS (C) (abstrc15, bigcat10,11,16, chatter, cheval, cougar, elk, fish, fish2, flycatch, flyhorse, gorilla, horses, moth, parrot, poco, tiger2,...)

#146: TINYPICS #8: FAMOUS FOLK (C) (alien, avalon, baby2001, double, face1,2,3, firestart, ladyhawk, madonna2, marie2, mariel, mean, monalisa, rio, robot, ronald, termn8er, thief, wmms_buz)

#161: TINYPICS #9: VEHICLES #2 (M): B-36, bel222b, escort1, extra1, f15strk, hele, mgtf, phalarop, refuel, romulin, shuttle1:2, sparrow, sr-71a, stealth, topgun, travel2, U-2, vaxhall)

#182: SPECTRUM PICTURE DISK. (C) spslide5 prg & 8 pics (aztec, goya, phil2, pompei, renoir, riveria, soralia, and the party).

#183: SUPERNEW DEMO. (C) New Neo picture show that plays mushc and displays a (user editable) horizontal scrolling text bar at the bottom. Note: texshow.tos needs older monitor. Slideneo, neofun, windows, and 9 pics (dragon, einhorn, midearth, monopoly, moreta, porsche, queen, tutuench).

#204: SPECTRUM SPACE #1. (C) 8 pics (Crab, earth, moonflag, orion, nasa1, nasa2, nasa3, patch1). Includes spslide8.prg.

#205: SPECTRUM SPACE #2. (C) 7 pics (Apollo 9, Apollo 10, Astro1, Earth1, Earth2, Earthris, Lem). Includes spslide8.prg.

#251: LAMBERT PICS #1. (C) 16 low-res Degas Elite pics (ace, spidey, viking, space, phobe, madonna, madonna1, madonna2, cybill, dragonpr, kitty, elie3, horsecrcol, monkey5, football, cowboy.)

#266: LAMBERT PICS #2. (C) Spectrum picture show (baseball, cobra, eagle, robocop, samfix1, samfox2, toucan, xformer2, spslide8.prg.

#268D: THE PLANETS. (C) Degas picture show (w/51 pictures) that provides an excellent graphical tour of the planets in our solar system.

#271: LAMBERT PICS #3. (C) Pictures by Rafael Nunez (Degas Elite: boat, bruce, carol, catstvns, cindy emberg, fantasy, favour, house, jacko, klingon, lin and dslide.prg).

#280: LAMBERT PICS #4. (C) 18 Degas Elite pics: annivers, beach, bell22b, cost, cb, cigs, cover36, daleck, deadship, dune2, dune4, dune5, dune6, girl3, hdlburg, helper, indy500, jimminy.

#292: LAMBERT PICS #5. (C) Spectrum: 2kittens, blackbird, chipmunk,fox, owl; Degas Elite: drag108, dragcol, drabcovl, dragon2.

#302: LAMBERT PICS #6 (C) 17 Degas Elite: 3dship, botart, f15, f18-3, frtank, bablec2, goali, hansolo, house, kingkool, kitty, klingnon, monument, porsche, spidey2, strohs, sun.

#312: NEO/DEGAS WINNERS. (C) 21 award-winning pictures: tribar, dragon, midearth, city2042, cougar4, distill, dungeon1, egore2, fighter, forest, gilbert, house, millyw, nitemoon, panzer, plantfal, pyramid, sailing, shuttle, snowcat, wayne.

#345: BERTHOLD'S PICS #1. (C) 8 Spectrum 512 pics from John Berthold: Anasaz1, blokblos, duckneuv, explore, moonfest, outback, philtoo, scape3c, and spslide.prg.

#371: BERTHOLD'S PICS #2. (C) More great Spectrum pics from John Berthold: Legend of Lost Fuji, Msiau Chou, Fantasy Fig 3, Escape, Skate Riguel, Story Teller, Eilean Donan, and Vlacherna Convent.

#392D: SPECTRUM PICS #6: (C) People. 17 Spectrum pictures (Alf, Anticad, Blade1, Clown, Donnaric, Ellen, Girl, Headroom, Kissme, Lady_clr, Laura, Lisaw, Madonna, Match5, Sam4, Samfox1, Terri.

#393D: SPECTRUM PICS #7: (C) Space. 20 Spectrum pictures (Aliennat, Callisto, Dethstar, Earth, Faces, Finhorn5, Glass, Juggy, Jupiter, Laserbee, Launch, Newtek, Outblue, Prism, Stardest, Timextal, Trek, Trontank, Voyager.

#394D: SPECTRUM PICS #8: (C) Cars and more. 18 Spectrum pictures (Appleton, Cobra, Convert, Decoy, Ferrari, Homer, Lilypond, Magnum, Mansion, Mazda,Ninja, Porsche, Redrx7, Redwing, Ship, Taxi, Tut, Tutmirr2.

#410 SPECTRUM COLOR CLIP ART. (C) clip art, by Steve Marshall, designed so Spectrum users can add detailed figures to their own creations. Includes Animals 1,2,3, City_bld, Country, Mountains, Skies, Trees, Western 1,2, and Vehicles. 3 sample complete pictures: Meadow, Street, Scene1.

SOUND/MUSIC

#60: MUSIC STUDIO #1. Some 50 songs for MUSIC STUDIO.

#78D: OXYGEN - Disco Version (By Hypnosis) 1Mb, DS

#79D: FOREIGN AFFAIR - (by Mike Oldfield), 1Mb, DS

#99D: MATT'S MOOD - (by Matt Bianco), 1Mb, DS

#114: MUSIC STUDIO #2. Over 40 SNG files for use with Music Studio that play without a MIDI keyboard/speaker system

#134: ST-REPLAY. Digitized sound demo of ST-Replay. Sound on color or mono. Picture on color only.

#196: CHRISTMAS DISK. (C) Christmas melodies along with holdiday pictures (Deck the Halls, Jingle Bells,Jolly Old St. Nick, Little Drummer Boy, Silent Night, We Wish You a Mery Christmas).

#197: MUSIC STUDIO #3. 65 songs (MIDI compatible) w/PD player.

#198: MUSIC STUDIO #4. 75 songs (MIDI compatible) w/PD player.

#199: MUSIC CONSTRUCTION SET #1. 32 songs w/PD player.

#216: MUSIC STUDIO #5 (C) Over 70 new songs for use with Music Studio. Includes PD player to create your own music albums.

#217: MUSIC STUDIO #6. (C) Another 70+ songs for use with Music Studio. Includes PD player so you can create your own music albums.

#218D: PLAYIT DEMO #1. Programs on this disk allow you to input a sound file from ST Replay and output a file that can be played with either of the two player programs provided. Disk includes collection of ready to play 'SND' files. Here your ST Talk.

#236: PLAYIT DEMO #2. More digitized sounds for your ST: Adam 12, Dragnet, Mr. Ed, Subether, and Synclock.

#237: MUSIC STUDIO #7. 35 more songs. Disk includes 2 PD song players and program to convert 8-bit Adv. Music System (AMS) songs to Music Studio formats.

#244: MIDIPLAY DEMO. MIDIPLAY V4.25 by Electronic Music Pub. House, includes 2 songs: Mozart Gavotte and Bach G Minuet 2.

#267D: GHOSTBUSTERS. Digitized music demo of Ghost Busters theme song. 1MB.

#296: STACATTO. Musical quiz game.

#327D: SONUS SUPERSCORE. {M} Demo of MIDI sequencing/scoring prg. 1Mb..

GRAPHICS DEMOS

#7: GRAPHICS DEMO #1. bounce, boink, cosine, cube, kal, somb, surfac, user, drop2, drop3, mvline, sa, stqix, stqux, strart, trench, doodle, cores, hex, pieram, popcorn, lowcirc, lowdemo, frac1,2,3,4, balls, clrmnd.

#50: FUJI BOINK. (C) Bouncing FUJI symbol, 7 SILENT SERVICE screens, demos from DUNGEON MASTER.

#64: DOLL ANIMATION. (C) Spinning dolls demo. 1Mb

#66: GLOBE DEMO. (C) Spinning world globe, rich2, sphere, stpatterns, supbox. 1 Mb

#67: BALL/BIRD DEMO. (C) Ball bouncing on mirror with multiple light sources & flying bird demo.

#77: CAD 3D ANIMATION DEMO. (C) Fractal Mountain.

#85: SOUND/GRAPHICS #2. st-speech.tos, mandlbox, disks, julia3, kleido, diskicon, OO TOPOS sample screens, music player & music files.

#90: SHINNY BUBBLES. (C).

#105: CN MOVIE. (C) shows animation effects possible on your NEO and DEGAS pictures using MAKE IT MOVE.

#115: ANIMATOR DISK. (C) The Aegis Animator Player with four ARC'ed routines to play. A pd animator of sorts to have fun with.

#128D: STEELYBOINK!. (C)

#129: SPHERES! DEMO. (C)

#151D: SPACE PROBE. (C) 1 Mb.

#152: PD3CTL. Motion control language for use with CAD 3-D, Ver. 2.0.

#172: JUGGLER DEMO. (C).

#173D: CYBERSCAPE. (C) Animated graphics demo from ANTIC. See disk change into

spaceship, fly into and explore inside of Atari ST. 1MB and DS drive. (C)

#174D: STAR TREK ANIMATION. (C) Several animated pictures featuring the starship Enterprise, constructed using CAD 3D.

#193D: CYBER FAMILY #2. (C) Sphere, Backflip, Bounce, and Anticado.

#202D: CYBER DEMOS. (C) 4 animations: chasers, elmsk31c, scout, texture (DS, 1Mb).

#203: SPECTRUM BALL DEMO. (C) 5 metal balls, hanging from rack, with 1st & last alternatvely swinging in and out.

#214: SPECTRUM MOVIE ANIMATION. (C) Imitation of Amiga demo that shows 4 monitor screens at the same time each with a different animated display.

#227: CASTING D'ENTERPRISES. (C) An impressive demo of the animation and graphics capabilities of the ST. This French "film" runs for about 7.5 minutes.

#235: CYBER DEMO DISK (C) 4 animations: CAMFILM, PSLOGO, RAISINS, and SAUCERB, with animate3. prg.

#259: GRAPHIC DEMO DISK. (C) Many Boink, Star Field, Degas Elite pics (500xjrev, anigakil, bill, hardrock, hitguide, hradiosc, armstron, qwert, surfcity), showpic2.prg.

#285D: STAR TREK (AVS). (C) Original opening to Star Trek and a well-done animation sequence. Note: AVS disks show animation and plays sounds simultaneously.

#286D: CALIFORNIA RAISINS (AVS) (C) Famous singing raisins.

#287D: MIAMI VICE (AVS). (C) Theme song played by animated band.

#308D: RUNAWAY CAT (AVS). (C) Watch tractor form and then run off into the sunset.

#337: GRAPHICS DEMOS. (C) AVS demos (Bugs Bunny and Space Battle), Cyber animation of Honda engiine.

#368D: VIDI-ST #1. (C) VIDI-ST digitized animation--two animation sequences of a dunk shot and a pitch, 1MB.

#369D: VIDI-ST #2. (C) Digitized animation--V.Johnson shooting a basket (1MB)

#409D: CYBER ANIMATIONS: (C) VISITOR is a 230-frame, 15-second loop animation in the Cyber Paint .SEQ format, and FROGGIE.

#417D: SATURN. (C) Spectrum animation of Saturn. 1 MB.

#418D: SEQUENCE FILES. (C) 3 animations: SKULL, DALEK, ZNETART. 1 Mb.

COMMERCIAL DEMOS

#301D: LDW POWER DEMO. Demo of LDW spreadsheet includes folder of VIP/LOTUS/LDW templates. DS disk.

#307D: CALAMUS DEMO. (M) Demo version of newest DTP program from Europe. Includes sample documents (some ARC'd). 1Mb, DS.

#327D: SONUS SUPERSCORE DEMO. Demo of this MIDI sequencing and scoring software package. 1Mb, mono.

#407: SHEET DEMO. SHEET is a spreadsheet, database manager, charting program and BASIC interpreter. The demo version has Save and Load WKS disabled.

#420: .ACCESS DEMO. Contains a stripped down version of the Desk Accessory and TOS versions of .ACCess!.

#424: MICRO RTX DEMO. Micro RTX is an OS replacement which works with TOS and allows multitasking of TOS programs. It provides the system services necessary for implementing multitasking in your programs.

#383: THE AMERICAN PASTIME BASEBALL SIMULATOR, Demo Game Program - V2.00D, October, 1989. The American PaSTime Baseball Simulator provides a very rich and accurate simulation of the game of baseball, from the viewpoint of the manager.

APPLICATIONS

#14: NEOCHROME. Program, docs, pictures.

#103: SKYMAP. (M) 1,560 of the brightest stars. Display map of stars, find a particular star, or identify a particular star.

#163: EDITOR DISK. PROEDIT: general purpose editor with outline feature; and ConTEXT, designed for use with Modula-2, but a good ed with any language.

#165: LIBRARY PROGRAMS. Menu.prg, diskcat V1.3, turtle companion.

#192: MICROEMACS, VER 3.9. text editor, includes MicroSPELL spelling checker.

#215D: A.I.M. Ver 2.3 (C/M) Atari Image Management System. Image manipulation program from Germany.

#233: SHEET. Shareware spreadsheet program. Includes docs.

#241: VDOS (Virtual Disk Operating System). Shareware graphic interface for easier access to frequently used programs.

#243: BOWLMAN, V1.22. Shareware program by George Terpening, Bowling Manager, helps you keep track of bowling statistics for yourself, your team, and your league. Files ARC'd.

#270: QUIZ PLUS. (C) Computer Assisted instruction system lets your ST teach you. Sample lessons (w/pictures). NO MEGA.

#276: DISK CATALOGER AND LABEL PRINTER. (Shareware dBMAN program by Saraware).

#281: MANUAL MAKER, V2.25. Use GDOS and GDOS fonts to produce attractive manuals (includes on-screen power and menu-driven intervace).

#295: STICKER. (C/M) German disk labeling program with graphic images.

#318: ASSISTANT CHEF. (C) Holds up to 300 recipes (42 included). Sort by recipe number, name, food group, food type, rating. Add to and edit recipes. View and/or print recipes.

#329D: GENIE ST ROUNDTABLE. Database of ST files available on GENIE, listed by file number (from 000 to 9999). Includes a variety of search options to help you find the file you are looking for.

#330D to #335D. SEEKER BIBLE. This set of **six disks** includes all 66 books of the Bible (4.5 megabytes of data) and software to help you find ANY word or phrase you choose.

#336: BSTAT STATISTICAL GRAPHICS PROGRAM. Extraordinary complete statistical package with virtually any statistical program you might need.

#370: NORAD. (C) Watch your screen as 97 real life satellites and meteors trace out their paths on your monitor.

#372: MAGNIWRITER ST. Bruce Noonan's ST Writer for the visually handicapped. All the word-processing power of ST Writer with large text. (C/M)

#380: THE REVOLUTION HANDBOOK. By Donald A. Thomas, Jr., 1989 ARTISAN SOFTWARE, this "handbook" comes with a viewer program that allows you to browse through the handbook on the screen.

#382: SUB_CAL, VER 1.14. A calculator with many extras, it computes arithmetic expressions and definite integrals, derivatives, and solves polynomial equations up to the second degree. Includes a simple plotting feature and allows for vector and matrix operations (including solving of linear equation systems).

#384: GEOGRAPHY TUTOR DEMO. Map and database for each European country wth useful facts that you can view and plot on the maps. No save feature.

#386D: JIL2D(tm) SHAREWARE DRAFTING PACKAGE. (M) Drafting tool: create, measure, dimension, save, and restore drawings using JIL"s unique interface. You can also make and use screen dumps, figure libraries, and parametric macros, just to name a few applications. 1 Mb.

#395D-#399D: THE TEX DISTRIBUTION. Compiled by Horace Mitchell. TeX system requirements: 1Mb The TeX Distribution has a core of 4 DS disks and a 5th DS utility disk.

#395D: TEX, and #396D: DRIVERS. Disks 1 and 2 contain the files for running TeX (and LaTeX) and for printing TeX documents respectively. These two disks are sufficient for trying out TeX. However, there are NOT enough font files included on Disk 2 for a complete implementation of TeX. Note also that Disk 1 (#395) includes the ZOO compaction program needed to uncompact the files provided on all five disks in the set.

#397D: METAFONT. Disk 3 contains the font generation program METAFONT, which can create any font that the printer drivers on Disk 2 need.

#398D: INITEX. IniTeX, a program for customizing TeX plus the slide maker SliTeX and the bibliography database BibTeX.

#399D: PICTEX. PiCTeX--a set of TeX macros designed for the creation of figures and graphs within TeX documents. MuTeX--a set of TeX macros and fonts for typesetting music scores. INPUT2 archive contains various style files for LaTeX that are not part of the standard style set described in the LaTeX manual.

#402: CONSTRUCTION ESTIMATOR V1.8. Helps you estimate quantity/cost of materials for building projects.

#408: ANI ST. (C) Previously marketed by Aegis as Aegis Animator.

#411: SPIRITWARE CONCORDANCE, V2.0, (C/M) Bible study tool makes use of mouse, windows, and menu capabilities of GEM to provide a fast, easy and powerful way to access words and phrases that appear in the scriptures. Includes text from Romans 1 through Philemon I. 1Mb.

#425: DMC LASERBRAIN, V1.31. Epson emulator for the Atari SLM 804 laser printer. Includes fonts in an ARC file. Font file is 636K unARC'd and will require a DS drive or hard drive.

#430: ST WRITER V3.8. Latest version of this excellent word processor by Dr. Bruce Noonan. Disk includes English, Spanish, and German versions, all updated to version 3.8.

CLIP ART

(Note: the color pictures above can often also be used as clip art in programs such as Publisher ST or Publishing Partner.)

#147: COLOR CLIP ART #1 (avlabels, dikclip1, disnyclp, dav1:2:3:4:5, fantasy, fun, history, kids, macfctry, macpaint, maninspc, map1:2, men1:2, paint2:4:5:6:7:8, picture1:2, sport1:2, women1:2)

#158: MONO CLIP ART #1 (animals, flags1:2, symbols1:2:3, astrology, custom1:2:3:4, christian, military1:2, transla1:2:3:4:5)

#159: MONO CLIP ART #2 (10 screens of uncompressed holiday and 'fun' clip art.)

#160: MONO CLIP ART #3 (bluejay, canadago, carstruk, cheata, chipmunk, clipart1:3:4:5:6:9:B:C, grabber, jaguar, sports1:2:3:5)

#239: CLIP ART #5. Holidays and Headers, 28 screens full of excellent clip art. Disk includes Picsw7 and dslide (C/M).

#245: CLIP ART #6. Mac Art 1. Mac Art Library. 27 screens (#1-27) of Mac clip art. Includes tinyview, tinystuf, dslide.

#246: CLIP ART #7. Mac Art 2. 24 screens (#28-51) of Mac clip art. Picswitch07, tinyview, tinystuf, dslide.

#247: CLIP ART #8. Sports. 24 screens of Mac clip art for sporting events. Picswitch7, tinyview, tinystuf, dslide, snapshot.

#248: CLIP ART #9. Whimsey. 21 screens of whimsical clip art. Picswitch7, tinyview, tinystuf, dslide, snapshot.

#249: CLIP ART #10. Food 1. 27 screens of food clip art. Tinyview.

#250: CLIP ART #11. Food 2. 22 more screens of food clip art.Tinyview, tinystuf, dslide, snapshot.

#355: IMG MORTISED CUTS. 19 IMG pictures: angel, artist, backsign, dinner, dog, dragon, elf, frntsign, jackbox, jester, mirror, paperboy, ship1, ship2, train, trumpet, twoelves, umbrella, wideman.

#416: CLIP ART AND TIME WORKS BORDERS. four houses in GEM format, 5 houses in PI2 Degas format, 1 Atari Logo in GEM format, 10 borders in Timeworks DTP format, and 4 IMG pictures of dragons and wolves.

HARDWARE MODS

#415: HARDWARE MODS #1. 25MGUM, how to upgrade a 520ST to 2.5MB or 4MB, plus programs to test the upgrades. MEGA2TO4, How to upgrade a Mega2 to 4 MB. TOS14, How to install TOS 1.4 6 chip set in a Mega ST. BLITZ, make your own analog disk copier. BLITTER UPGRADE, how to add a blitter to your rev B motherboard.

#427: HARDWARE MODS #2. MIDI Net - how to network two STs through the MIDI ports. Turbo 16 - How to install the accelerator board and utilities to turn it on and off.

CPM EMULATOR DISKS

#86: CP/M-80 EMULATOR TOS DISK. A complete CP/M-80 Version 2.2 compatible system environment. Disk includes TOS, PRG and DOC files and ARC file containing CPM programs on #87

#87: CP/M-80 DISK #1. Disk in CP/M-80 format: two dozen CPM utilities released on Atari's CP/M disk.

New for APRIL

#430: ST WRITER ELITE, V3.8. Latest edition of this superb word processor. Changes in the new edition: (Note: 3.2 and 3.3 had bugs in the Search/Replace which precluded null replacement. 3.4 sometimes would not load an AtariWriter file from another directory. This was fixed in 3.6)

- ✓ The Global Search and Replace is now roughly 60 times faster!
- ✓ The free memory byte counter can now accommodate values up to 95 Meg to be compatible with the TT which can handle more than 25 Meg of RAM.
- ✓ In non-GEM mode in many instances the Enter key acts the same as the Return key.
- ✓ The placement of the cursor with the mouse now updates the line/column numbers immediately (as opposed to updating them on the subsequent key stroke.)
- ✓ An info status line has been added on the GEM menu screen which keeps track of the name and path of the current file in memory.
- ✓ When you oversave a file which exists, you are warned, and the alert box tells you the name of the file which you are attempting to overwrite (nice, in case you click on the wrong file, or type in a name which you didn't know was already a file in the same directory).
- ✓ If you have TOS 1.4 in ROM, file selector boxes now indicate their function. (eg., did you select delete, load, save or what??).
- ✓ For users of the MEGA TOS (1.2) and the buggy disk-loaded version of TOS 1.4 (1988), previous versions required you to move the mouse pointer outside of the menu area at the top of the edit screen when pressing the [ESC] key to return to the menu screen. This was done to correct for a GEM bug which drops menus on the mouse, leaving holes in the menu like swiss cheese. No problem with the original version of soft-load TOS, 1.0, and 1.4 (1989). Now, the mouse automatically drops out of the area.
- ✓ All disk i.o. has been updated and thoroughly debugged.
- ✓ ^A, ^Z, CTRL Right Arrow, CTRL Left Arrow now work in command box.
- ✓ Improvements to the form input (from disk file) have been made, and bugs that caused screwy things on wrapping an insert word occurring at the end of a line have been squashed.
- ✓ You can now print only odd, only even, or all pages, so that printing double-sided text on your printer output is now possible.
- ✓ The .RSC file no longer is necessary, as the resource is now part of the program file itself.
- ✓ Support for Moniterm monitor. 160 columns by 57 lines, or 160 by 93 lines in hi-res flip-flop. (ver. 3.7).
- ✓ ver. 3.6 had a bug in the floppy format routine which appeared on TOS versions previous to TOS 1.2 (Mega TOS), and caused a fatal crash. Fixed in 3.7.
- ✓ The mouse cursor state is neutralized at exit further enhancing running of the program from a shell.
- ✓ ALL PREVIOUS VERSIONS TO 3.8 WILL NOT RUN PROPERLY ON THE STe COMPUTERS. THE TEXT AND BACKGROUND APPEAR THE SAME COLOR WHEN YOU PRESS ^T TO TRANSFORM COLORS. 3.8 works fine on the STe.

As always, any bugs, let me know. Bruce Noonan, M.D., Compuserve [72407,504] or Genie [B.Noonan]

Order ST and/or Magic and Spectre disks from:

CN Library

122 N. Johnson Road

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Disks are $4.00 each. Add $1/(6 disks) for shipping and handling up to a maximum of $6.00.

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50 disks for $150

All CN disks are guaranteed. If you ever have a problem with a CN disk, just return it and we will gladly replace it. We can now accept VISA and MC orders.

#431: KIDPUBLISHER PROFESSIONAL DEMO. (C) A desktop publishing program for young writers, Copyright 1989, 1990 by D.A. Brumleve, for Ages 5-11. The program provides a what-you-see-is-what-you-get text editor and a drawing program. Each drawing is linked to a page of text. When printed, each page has a drawing on the top half of the page with the text below it. The pages can be assembled into a booklet, if desired, and a title page without a drawing can also be printed. The program works well with most dot-matrix, jet, and laser printers. (Printing disabled in demo version.)

#432: CALAMUS FONTS #2. By Michael D. Hall. I have worked on these fonts, as have others, for many long hours. The Bodoni font is easy to read (at least that is my opinion, but then I also like classical music) and was not too difficult to build. I have copied the Drurylane font from Timeworks Publisher ST as I have graduated from that program to Calamus and needed it when I copied some of the documents done with Pub. ST into the Calamus format. The Hallbats font (ie. Zapf dingbats to you) is as complete as I could get it from the books I had at my disposal, it has over 65K and therefore took quite a while to finish.

#433: UTILITY #38. CHROME!, font similar to ITC Machine font; DICTIONARY, stand alone spell checker; DISKLABEL V2, simple 3 1/2" label printer; FORMS, fill out preprinted forms on your printer; PS_35, postscript/uscript screen fonts for use with Fleet Street Publisher; PAPACNT, paperless accountant, makes nice graphs and reports.

#434: UTILITY #39. VIEWGIF, allows your ST to show graphics created on a PC or Amiga, even if the original picture has more colors than the ST can show, and allows you to convert ST pics to GIF format for transfer to other computers; INVERT, Degas/Neo color pallet inverter; DEPS, desk accessory Degas Elite pixel switcher lets you change color value of a pixel in Degas pic; CV2IMG98, convert most pic types to IMG files. Includes maps for Lynx game Electro Cop in GIF format.

#435: UTILITY #40. BIORHYTHM, calculator as a desk accessory; FASTLZHV2, fast file compressor/uncompressor LZH format; FLU, virus simulator simulates most ST virus types; TXTDUMPV2, program and da text file printer with batch output; RESISTOR, resistor color coder/decoder with speech (low rez); UNCLE utilities, file cataloger and copier, DA clock, DA for showing free ram, MIDI color strobe.

#436: GAMES #26. (C) FIGHTER, space fighter shoot'em up; FLIGHT, simple shoot 'em up; LUNACY II, STOS game similar to Tetris,.not for TOS 1.4.

#437: SPACE ACE ANIMATION. (C) Terrific, colorful cartoon animation with sound. Only 15 seconds, but IBMs can't do this!

#438: GAMES #27: (M) MINI GOLF, put-put golf game from Germany; PBM CHESS, Play-by-modem chess game, now you can play chess against an opponent over your telephone (color or mono); GILGALAD, adventure game from Germany.

#439: UTILITY #41: ACYPRY, deactivates/activates auto programs; CANVAS, Neodesk canvas allows you to change the background pic on the fly; CLKSNK16, Clock sync sets all internal clocks to the same time; INF_LOAD, loads Neodesk file quickly; LIST102, 80-column file display; RAMPLUS, desktop formatter and full function copier and a ram disk and print spooler; ST_UNZIP, for pc ditto users, extract files faster than with PKUNZIP; TEMPEL19, machine language debugger and monitor; UNTAR, reads single files from floppy or series of floppies created using TAR backup prg; UUX, mail file decoder.

NOVATARI: Northern Virginia Atari Users' Group

President	Millicent Gompertz	703-960-6706
ST VP	Paul Cartwright	301-460-1431
8-bit VP	Tom Eckhardt	
Membership	Earl Lilley	703-281-9017
Treasurer	Gary Purinton	703-264-8826
ST Librarian		703-450-3992
8-bit Librarian	Geoff DiMego	703-425-5030
8-bit Mail	Thom Parkin	
Sterling Chapter	Richard Gunter	703-471-7765
ARMUDIC Sysop	Scott Ogden	703-450-3992

New Members: Dues are $24/year/family and include a subscription to *Current Notes* and access to more activities. Join at the main meeting, at a chapter meeting, or by sending $24, payable to NOVATARI, to NOVATARI, PO Box 4076, Merrifield, VA 22116.

Novatari Main meeting: **2nd Sunday** of the month at the Washington Gas Light Building, 6801 Industrial Rd, Springfield, VA. Take 495 to east on Braddock Rd.(620) to south on Backlick Rd (617). Left on Industrial Rd. Washington Gas Light is the second building on the right. 5:30 Programmers SIG; 6:15 announcements, open forum, door prizes; 6:45 VAST and 8-BIT SIG meetings.

Chapter Meeting: Sterling, Sterling Library, 7:30-9:30, Wed after the 2nd Sunday. Contact Richard Gunter at 471-7765.

A.U.R.A.: Atari Users Regional Association

President	Ira Horowitz	301-384-0809
8-bit VP	Chuck Spring	301-262-0114
ST VP	Stewart Rosenthal	301-989-1755
Treasurer/Membership	Bill Brown	301-279-7537
16-bit Librarian	John Barnes	301-652-0667

Meetings: **3rd Thursday** of each month in the Multipurpose Room at Grace Episcopal School. The school is on the east side of Connecticut Ave, 1/4 mile north of the Connecticut Ave (North) Exit from I495. Library and swap table sales begin at 7:15, the meeting begins at 7:30. We have separate XL and ST demonstrations. There will be ST and 8-bit door prizes.

Correspondence: All correspondence, including membership renewals, changes of address, etc. should be sent to: AURA, PO Box 7761, Silver Spring, MD 20910.

New Members. Dues are $25/year and include a subscription to *Current Notes*. Send name, address, phone number, and check to above address.

FACE.: Frederick Atari Computer Enthusiasts

President	Chris Rietman	301-791-9170
Vice President	Mike Kerwin	301-845-4477
Treasurer	Buddy Smallwood	717-485-4714

Meetings: **4th Tuesday**, 7-9:30 pm, Walkersville High School, MD Route 194, 1 mile north of MD Route 26 (Liberty Road). July and August meetings will be held at St Paul's Lutheran Church, 14 W. Pennsylvania Ave, Walkersville, MD.

New Members: Dues are $25/year/family and include a subscription to *Current Notes*. Join at meeting or send check, payable to FACE, to Buddy Smallwood, PO Box 2026, Frederick, MD 21701.

GRASP: Greater Richmond Atari Support Program

President	Mickey Angell	804-744-3307
Vice President	Terry Barker	804-379-8175
Secretary	Tom Marvin	804-233-6155

Meetings: 2nd and 4th Thursday, at La Prade Library, 2730 Hicks Rd. Dues are $20 per year and *do not* include *Current Notes*.

WACUG: Woodbridge Atari Computer Users' Group

President	Lou Praino	703-221-8193
Treasurer	David Waalkes	703-490-1225
Librarian	Frank Bassett	703-670-8780

Meetings: 7-9 PM, Community Room, Potomac Branch, Prince William County Library, Opitz Blvd, Woodbridge, VA. Entering Woodbridge from either North or South on Route 1, proceed to the intersection of Route 1 and Opitz Blvd (opposite Woodbridge Lincoln-Mercury). Turn West on Opitz and take first left turn into the library's parking lot. The Community Room is located to your left immediately upon entering the main building. Meeting schedule: **Apr 23, May 29, Jun 19.**

New Members: Initial membership fee is $10 plus $1 monthly dues. Renewals are $20 per year, payable as of 1 January. Membership includes a subscription to *Current Notes*. Join at meeting or send check, payable to WACUG, to David Waalkes, 1302 Oregon Ave, Woodbridge, VA 22191.

MACC: Maryland Atari Computer Club

President	Jim Hill	301-461-7556
Vice President	Alan Kassinof	301-486-1389
Treasurer	John Cromwell	301-747-0949
Secretary	Tim Caldwell	301-687-1413
8-bit Librarian	Bill Bogdan	301-679-7262
ST Librarian	Tim Caldwell	301-687-1413
Newsletter Ed	Charles Smeton	301-465-8628

Meetings: **Last Tuesday**, 6:30 pm, Pikesville Library, 1 mile east on Reisterstown Rd from Exit 20 off the Baltimore Beltway.

New Members: Club Dues are $25/year and include a subscription to *Current Notes*. Join at meeting or send check, payable to MACC, to James Hill, 8591 Wheatfield Way, Ellicott City, MD, 21043.

MAST: Meade Atari ST Users Group

President	John Corkran	301-255-1674
Secretary	John Corkran	301-255-1674
PD Librarian	Dave Napierala	301-490-8217
Tangent Line Sysop	Thomas Hutchinson..	
Tangent Line BBS		301-850-5045

Meetings: **2nd Tuesday** of each month at the Province Branch Library at the intersection of Ridge Rd/Rochenbach Rd and MD 175 in Odenton at the rear of the Severn Square shopping center. The meetings run from 6:30-9:00 pm. Call Bob Johnson any evening for further information. All correspondence, including membership renewals, changes of address, etc. should be sent to: MAST, c/o Bob Johnson, 1616B Forrest Ave, Ft Meade, MD 20755.

New Members. Dues are $27/year and include a subscription to *Current Notes* and unlimited download and message activity on the Tangent Line BBS. Send name, address, phone number, and check to above address or join at any meeting.

This space is available to WAACE clubs for publicizing activities. Material for the WAACE Club corner is due to the WAACE Editor by the 3rd of each month. Send copy to Ed Seward, PO Box 2699, Merrifield, VA 22116. Material can be uploaded to the ARMUDIC BBS.

ARMUDIC BBS

703-450-3910

5 lines, 300/1200/2400 Baud, 8 & 16 bit

Access to the BBS costs $8/year for NOVATARI members and $12 for non-members. Send your check, made payable to "NOVATARI," to: NOVATARI, P.O. Box 4076, Merrifield, VA 22116.

AtariFest '90

WAACE Goes Upscale

By Russell K. Brown

Yes, folks, it is that time of year again. Time to be planning your participation in the next Washington D.C. area Atari Computer show. Organizational planning has been underway for AtariFest '90 since September of 1989. Before the Washington Area Atari Computer Enthusiasts, known as WAACE, concluded the successful AtariFest '89, the board had already begun preliminary plans for this year's show. The planning effort went into high gear in January with the election of the new WAACE Board. Member clubs elected their representatives to the board in December and these delegates elected officers in January and began the planning process in earnest. Elected to officer positions on the WAACE board were Russell Brown as Chairman, Charles Smeton as Vice-Chairman, Rich Avey as Secretary, and Tom Stoddard as Treasurer. These four, along with the representatives from the member clubs, will plan this year's Fest.

Many changes are in store for the vendors, developers, and attendees alike at this year's show. WAACE strives to improve the show every year, but has always resisted the big step, going to a real convention center and leaving the comforting confines of good ole Fairfax High School. Well, as the board was tackling that very question, lo and behold, we found out that the Fairfax County Public Schools Adult Education folks, our local school sponsors, had decided to no longer support us. As a result, we had to find a new Fest location and fast. We attempted to find other public buildings that could hold us, but failed. We looked for hotels with convention facilities and researched many but only one had our preferred October dates open; so AtariFest '90 will be held at the Sheraton Hotel in Reston Virginia, near the Dulles Airport on October 6 and 7, 1990.

The Fest location is a fine one and allows us to put together a better show. All AtariFest '90 activities will take place in the hotel. Additional benefits of the new Fest location include an increase in vendor sale hours from eleven to eighteen, no competition with other activities like concerts and religious services, improved physical layout with all activities closer together, more hotel rooms, better security, and a more professional look with the services of Arata Expositions, Inc.

Arata Expositions is the official show decorator and exhibit service contractor and has previous experience with major computer shows such as the Federal Office Systems Expo, the Federal Microcomputer Expo, and the Washington MacWorld show.

This year's show will be patterned after last year's successful show. Sale hours will be from 10:00 am to 7:00 pm on Saturday and Sunday, 6-7 October. User group demo rooms and seminars will run from 11:00 am to 6:00 pm on *both* Saturday and Sunday. Seminars will feature people from the Atari community speaking on a variety of topics. User group demos will include Art and Graphics, Desktop Publishing, Telecommunications, MIDI, Programming, and others. The annual banquet will feature a guest speaker and the *Current Notes* Author of the Year Award presentation. The Banquet will be Saturday at 8:00 pm right after the social hour at 7:00 pm. Socializing will continue after the banquet until the last person drops off! Tentative plans call for a Developers' breakfast on Sunday morning at 8:00 am. A meeting of User Group officials with Bob Brodie, the Atari Corporation's User Group Coordinator will also be scheduled.

With this schedule you will want to come and stay the weekend. WAACE has arranged for specially priced hotel rooms in the Sheraton. Hotel rooms will cost $59.00 for one or two people. If you pay $66.00, you will get a breakfast buffet! Rooms with three or four people will cost $66.00. With the larger capacity the Sheraton Reston should be able to hold all of the people who want rooms, but make your reservations early and ask for the AtariFest rate. In order to guarantee rooms, you should make your reservations by 5 August, 1990.

Unfortunately, with all of the improvements in the Fest this year, the price to participate has increased. The initial basic booth for vendors, which includes an eight by ten foot area with eight foot backdrop, three foot side drapes, a six foot draped table and electricity will run $500, $400 if ordered before 1 July. There is a discount for multiple booths. Booth price also includes a half-page ad in the program.

Admission for Fest attendees will also be charged for the first time. The exact price has not been determined, but will be no more than $5 for one day or $7 for two days. Tickets will be free to people staying in the hotel. Initial vendor solicitation packets have been posted on Genie. Paper copy vendor packets are planned to be sent out the first week of April. Priority on packet mailing will be made to those vendors and developers who participated last year in AtariFest '89. To get the discounted booth prices, vendor checks must be postmarked by 1 July 1989. Any interested vendor may request a packet by calling the vendor coordinator, John Barnes at (301) 652-0667.

The WAACE AtariFest is for the people. We want the Fest to be your show. If you have any ideas, comments or questions and would like to get them heard, then send me a message on GENIE (R.Brown3), ARMUDIC, the first Atari BBS (Russ Brown), or simply call me at (703)-680-2698. GENIE also has a topic on the Fest. Look for us in Category 11, User Groups and Shows, Topic 6: WAACE AtariFest 90.

Current Notes' Registered Atari Clubs

Members of registered clubs may subscribe to *Current Notes* at a discount rate (**$20/year** or **$38/2 years**). To add your club to the list, send an initial subscription list of 10% of the members or 6 members whichever is less, to CN Registered Clubs, 122 N. Johnson Rd., Sterling, VA 22170. For more information, call Joyce (703) 450-4761. NOTE: Canadian Atari clubs are also eligible. Canadian club rates are $28/year or $54/2 years)

Abbreviations: ACE=Atari Computer Enthusiasts, ACO=Atari Computer Owners, ACUS=Atari Comp. Users Society,AG=Atari Group, AUG=Atari Users Group, UG=Users Group

Alabama

Huntsville AUG, Levin Soule, 3911 W. Crestview, Huntsville 35816 (205) 534-1815.

Arizona

Tucson Atari Central, Sam Furrow, 2116 E. 1st St, Tucson, 85719 (603) 323-3410

Arkansas

Little Rock Atari Addicts, Keith Steensma, 28 John Hancock Cir, Jacksonville, 72076 (501) 985-2131.

California

Atari Bay Area CUS, Bill Zinn, PO Box 22212, San Fran. 94122 (415) 753-8483.

San Diego ACE, Tom Briant, PO Box 203076, San Diego 92120 (619) 581-2477.

Santa Maria/Lompac ACE, Mike Jacobson 608 N. Pierce, Santa Maria 93454 (805) 925-9390.

Connecticut

AUG of Greater Hartford, 503-B East Center St, Manchester 06040 (203) 623-8833.

Fairfield County ACE, Paula Burton, 362 Hattertown Rd, Monroe 06468 (203)-452-1716.

ST Atari Road Runners, Glen Werner, 1160 South Curtis St, Wallingford 06492.

ST Atari Users Society, Brian Rufini, 176 Burnside, E. Hartford 06180 (203) 289-7903.

Delaware

Dover Users of STs, Al Beddow, 4434 Vermont Dr, Dover 19901 (302) 697-3830

Florida

Atari Boosters League East, Hadley Nelson, P.O. Box 1172, Winter Park 32790.

Idaho

Rattlesnake ACE, Bonnie Walden, 301 Birch St, Mountain Home, 83647 (208) 587-7476

Illinois

Central Illinois AUG, Robert Handley, 1920 East Croxton Ave, Bloomington 61701-5702 (309) 828-4661.

Lake County ACE, Dwight Johnson, PO Box 8788, Waukegan 60079 (312) 623-9567.

ST Information Group, Joe Lambert, 1116 Woodlawn Ct, Pekin 61554.

Indiana

Calumet Region AG, Jeff Coe, 706 Center St., Crown Point, 46307 (219) 663-5117.

Eli Lilly Corp ST UG, Karl Werner, Eli Lilly Corp Cntr, Indianapolis 46285 (317) 276-3020.

Iowa

Midwest AG-Iowa Chap, Gordie Meyer, PO Box 1982, Ames 50010 (515) 232-1252.

Kansas

Ft. Leavenworth AG, PO Box 3233, Ft Leavenworth 66027.

Lawrence Atari Comp. Club, Robert Drake, PO Box 1415, Lawrence, 66044 (913) 842-5961.

Wichita ACE, Marilyn Merica, 501 Trotter, Maize 67101 (316) 722-1078.

Kentucky

Atari Exchange of Louisville, Don Garr, PO Box 34183, Louisville 40232.

Louisiana

Only ST UG, William Sammons, 2144 Emerson St, Gretna 70056.

Maryland

*** Atari Users Regional Assoc**, Bill Brown, PO Box 7761, Silver Spring 20910 (301) 279-7537.

*** Frederick ACE**, Buddy Smallwood, PO Box 2026, Frederick 21701 (717) 485-4714.

*** Maryland Atari Comp Club**, James Hill, 8591 Wheatfield Way, Ellicott City 21043 (301) 461-7556.

*** Meade Atari ST**, Bob Johnson, 1616B Forrest Ave, Ft. Meade 20755

Southern Maryland AUG, Sam Schrinar, 2032 Alehouse Ct, Waldorf 20601 (301) 843-7916.

Massachusetts

Nashoba Valley ACUS, Dave Burns, PO Box 456, Maynard 01754.

Michigan

Michigan Atari General Info. Conf., Mike Lechkun, 4801 Martin Rd, Warren 48092-3491.

Minnesota

SPACE/MAST, James Schulz, PO Box 12016, New Brighton 55112 (612) 533-4193.

Missouri

ACE St Louis, Joan Ryan, PO Box 6783, St. Louis, MO 63144 (314) 645-6431.

Warrensburg/Whiteman ACO, Les Lynam, PO Box 199, Warrensburg 64093 (816) 747-2543.

New Jersey

Jersey Atari Computer Group, 8 Crescent Rd, Pine Brook 07058.

New York

ACE UG of Syracuse, Bernice Futterman, PO Box 658, Sylvan Beach 13157 (315) 762-4878.

ACO of Rochester NY, Bruce Nelson, PO Box 23676, Rochester 14692 (716) 334-5513.

Capital District ACE, Joe Bogaard, PO Box 511, Delmar 12054

Rockland Atari Comp UG, Richard Bloch, 29 Riverglen Dr., Thiells, NY 10984 (914) 429-5283.

North Carolina

Blue Ridge ACE, Bill Traughber, 106 Alpine Way, Asheville, NC 28805 (704) 298-0179.

Charlotte AUG, Joe Venturelli, PO Box 240313, Charlotte 28224 (704) 366-4320.

Peidmont Triad AUG, Nora Schwier, PO Box 1073, Greensboro, 27402 (919) 674-9196.

Triangle Computer Club, Donald Nelson, Rt. 3, Box 760, Hillsborough 27278 (919) 942-2764.

Ohio

Cleveland ACE, John Savarda, PO Box 93034, Cleveland 44101-5034.

Miami Valley ACE, Bruce Hansford, P.O. Box 24221, Huber Heights, 45424 (513) 439-1993.

Pennsylvania

Allentown Bethlehem Easton's ACE, PO Box 2830, Lehigh Valley 18001 BBS 215-868-4856.

N. E. Atari Team UG, Allan Zaluda, PO Box 18150, Philadelphia 19116-0150.

Spectrum AG of Erie, Earl Hill, PO Box 10562, Erie 16514 (814) 833-4073.

Southcentral PA ACE, Richard Basso, PO Box 11446, Harrisburg 17108 (717) 761-3755.

South Carolina

Greenville ACE, Mary Anne Terminato, 19 Alpine Way, Greenville 29609 (803) 292-2690.

South Dakota

Rushmore ACE, Gregg Anderson, 3512 Lawrence Drive, Rapid City, SD 57701 (605) 348-6331.

Tennessee

Chattanooga Atari Owners Symposium, Phil Snider, PO Box 80101, Chattnooga 37411

Knoxville AUG, Bill Brosey, 953 Roderick Rd, Knoxville 37923 (615) 693-4542.

Texas

DAL-ACE, Rachel Duke, PO Box 851872, Richardson, 75085-1872 (214) 429-6134.

ST Atari League of San Antonio, David St. Martin, 3203 Coral Grove Dr, San Antonio 78247 (512) 496-5635.

Virginia

Greater Richmond Atari Support Program, Thomas Marvin, 1420 Yale Ave, Richmond 23224 (804) 233-6155.

*** Northern Virginia AUG**, Earl Lilley, PO Box 4076, Merrifield 22116 (703) 281-9017.

Southside Tidewater Atari Tech Users Soc, Dick Litchfield, 1805 St. Regis Circle, VA Beach 23456 (804) 468-6964.

*** Woodbridge Atari Computer UG**, David Waalkes, 1302 Oregon Ave, Woodbridge 22191 (703) 490-1225.

Washington

Seattle Puget-Sound ACE, Nick Berry, PO Box 110576, Tacoma 98411-0576 (206) 759-1473.

STDIO, Ralph Plaggenburg, 904 N. 33rd Pl, Renton, 98056 (206) 228-5303.

Wisconsin

Milwaukee Area AUG, Dennis Wilson, 3301 S. 93rd St, #108, Milwaukee, WI 53227 (414) 546-0282.

Packerland ACUS, Peter Schefsky, 2714 South 11th Place, Sheboygan, 53081 414-457-4519.

Canada

Montreal Atari Club Atari de Montreal, PO Box 5418, St. Laurent Station, Ville St. Laurent, H4L 4Z9

The Montreal Atari ST/Mega Group, Jonathan Seldin, 4235, ave. Wilson, Montreal, Quebec H4A 2V1

* Includes subscription to *Current Notes* with club membership.

NOVATARI XL/XE PD Library!

In response to many concerns voiced by our customers, we have decided to revamp our XL/XE selection of library disks. After considering many of the options available to us, we have decided to start a new XL/XE library containing all new titles and a few old ones all put together in a new, consistent format. This format means that the disks will be easier to use and will contain more quality software.

Due to the amount of work involved in releasing fifty new disk titles, the new disks will be appearing at a rate of hopefully five or six a month. The old library will still be available and a list may be obtained from the Mail Order Librarian.

To prevent confusion between the old and the new libraries please use the new three letter and number code to identify orders from the new library.

Attention all programmers! NOVATARI is always seeking contributions to its library. If you've written something you think others would enjoy using or you have something we don't, by all means, send it in. Please remember that all submissions should be public domain or shareware. Disks accepted into the library will be exchanged for library disks on a one-for-one basis. Please indicate your choices when you send in your submissions. Please send your submissions to:

Jeff King
10033 Clearfield Ave.
Vienna, VA 22181

Applications

APP1 – Textpro 4.0 (Latest text editor for the Atari. Works with Mydos 4.50)

Demo Disks

DMO1 – Classic 8–bit Demos (A collection of 7 demos from the early days of Atari.)
DMO2 – 8–bit Graphics Demos (4 of the more recent 8–bit demos.)
DMO3 – Video Blitz (130XE Required) (One of best 8–bit demos ever released.)
DMO4 – German Sound and Graphics (An excellent art and music demo.)

Disk Operating System

DOS1 – DOS 2.5 (An old DOS standby.)
DOS2 – Rainbow DOS (An interesting graphics dos.)
DOS3 – Desktop DOS (A demo of an ST–type desktop for the <dl>8–bit.)
DOS4 – DOS 4.0 (Never officially released by Atari.)
DOS5 – DOS 2.6 (Similar to DOS 2.5)
DOS6 – MachDos 3.7a (An Atari DOS alternative.)
DOS7 – Mydos 4.50 (One of the best Atari DOS substitutes.)
DOS8 – DOS XE (The DOS released by Atari to provide support for the XF551 drive.)

Game Disks

GAM1 – Text Adventures (Secret Agent, Survival, Kidnapped, Adventure in the Fifth Dimension)
GAM2 – Space Games II (Outpost, Microids, Blockade, Nukewar, TrekST, Maniac Maze, Space Fort)
GAM3 – Machine Language Games (Fifteen fast 100% M/L games)

Graphics

GRA1 – Video 130XE version 2.10 (Requires a 130XE. An image acquisition and processing system. Requires Computereyes to acquire images.)
GRA2 – Video 130XE Images (4 images for use with the Video 130XE program.)
GRA3 – More Video 130XE Images
GRA4 – GIF 2.0 (Allows you to view the high resolution color pictures in the Graphic Interchange Format (.GIF).)
GRA5 – GIF Pictures (Several pictures for use with the GIF Viewer above.)
GRA6 – DRAW 7 (130XE Required. Excellent drawing program that includes animation capability.)

Utilities

UTL1 – Screens (An impressive windowing utility.)
UTL2 – Help Key Routine (Include the HELP key in your own programs.)
UTL3 – ARC/ALF Utilities (Several file compression and decompression utilities.)

Disks are **$3 each** with $1 shipping per 3 disks. Send all orders to:

Thom Parkin,
701 N. Sterling Blvd.,
Sterling, VA 22170

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Novatari XL/XE PD Library		79
O'Massey	702–972–3659	61
Software Plus		63
ST Informer	503–476–0071	63
ST World	800–842–9034	1
Templicity	415–655–2355	53
Tidbit Software	413–584–7722	9
Toad Computers	301–544–6943	40

CN Classified Ads

CN classified ads are available to all of our readers. The cost is just a penny per character. Send copy to CN Classified, 122 N. Johnson Rd, Sterling, VA 22170.

FOR SALE OR TRADE: Over 110 disks of PD clip–art (mostly double–sided, mostly IMB format) are available for sale or even–up trade for other clip–art. Prices start at $5.00 DS, $3.50 SS. For catalog, send a SASE to Electronic Spinster Graphics, Linda Peckham, 704 Arkansas, Lawrence, KS 66044.

TIME TO RENEW???

Check your mailing label! If the first line has **'9004'** on it, that means your subscription ENDS in 1990 on the 4th month, i.e. this **APRIL** issue is the **last one** in your subscription. Send your renewal in as soon as possible so you don't miss any issues. If the label says 9005 or 9006, your subscription will soon be up. *Please* renew early. If we have to drop your name from the database and then add it back later and send out a special mailing, it is quite a bit more work for us. Thank you for your help.

Tell A Friend about CN!

Do you enjoy your issue of *Current Notes*? If so, why not tell your Atari friends about us? Our circulation was, at best, stable in 1989. We would like to expand in 1990 and bring CN to more Atari households. The more people that subscribe to CN, the more likely that we will be able to continue bringing you the latest news, indepth, honest product reviews, commentary, and tutorials. Is your club on our Registered Club list? Encourage your club officers to register. This not only introduces CN to more Atari fans, but it also gives your club some publicity *and* lets *you* renew at a discount.

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